An Address
ON THE
TREATMENT OF PUERPERAL FEVER.

Delivered before the Midland Medical Society at Birmingham, Oct. 20th, 1880,

BY J. MATTHEWS DUNCAN, M.D.

(Concluded from p. 685.)

SEPSIN, or chemical products of decomposition dissolved in water are absorbed by the extensive mucous surfaces of the vagina and uterus, with their lymphatics, and by the placental and other wounds in the genital tract. Or they pass freely into the uterine sinuses and thus into the general circulation. The result is quick pulse and respiration, high temperature, delirium, and often purging. If the poisoning is slight, symptoms are slight. If the poisoning is by a large dose the symptoms are urgent, and death may result, and this without any added septicæmia to produce the fatal event.

During the currency of the disease or poisoning there is the possibility of a cure, almost sudden, by removing the fetor or stopping the supply of the poison. Nothing is more striking or more gratifying in the whole practice of medicine than this sudden recovery; and, as it is often produced by art, it deserves the name of a cure. A patient in the most alarming condition, apparently within a few hours of death, is appropriately treated, and within a few hours alarm has entirely subsided. It is not in lying-in women alone that such cases are seen; but sapræmia is more frequently observed in them than in others, and the joy of recovery is greater because the foreseen danger is greater, for evident reasons.

An aggravated case of this kind was recently under my care in St. Bartholomew's Hospital, and I shall give you a sketch of it from the notes of Mr. Nall. The largeness of the retained placental mass made the cause of the disease evident and easily discovered; and in this respect it is not like the run of similar cases which are classed under the designation puerperal fever. The recovery in it was so great, so quick, and so nearly complete, as to be scarcely credible. The woman appeared to be at the point of death. It was apparently not worth while to disturb her by treatment. In a few hours after the treatment she was comfortable, and every alarming symptom had disappeared. Yet for some days there was slight recurrence of fetor and persistence of diminished symptoms, but not to such a degree as to cause any suffering or alarm for the ultimate safety of the patient. Were the case not a typical one I should not take up your time with it.

A. E—— was delivered naturally of her second child on June 8th. Flooding occurred after the birth of the child, and slight blood loss continued for seven days. Then the lochia became fetid. On the eighth day she had rigors, which were repeated daily. She was brought into the hospital on the tenth day, and was delirious during the night. On the eleventh day of her lying-in, when I first saw her, she had no complaint of pain, was pale, sick, frequently vomiting, troubled with diarrhœa; the uterus tender; breath sweet; respiration hurried, 44; pulse 146; temperature 104·2°; copious flow of stinking lochia. A piece of placenta was removed from the vagina. Under the influence of chloroform the hand was introduced into the uterus, which was soft and easily admitted it, and adherent placental masses were removed, some small shreds being left after many had been separated by volsella. The whole genital tract was then washed out by copious injections of carbolic lotion (1 in 30). Ergot of rye was administered, and the uterus was washed out every four hours during the day. The report of the next day bears that she had a good night without delirium, that the bowels had been twice moved, the motions being thin, yellow, and offensive. The discharge was slight and slightly fetid; the breasts were tender and swollen; the pulse had fallen to 100, the respirations to 36, and the highest temperature was 101·4°. The whole aspect of the case had changed from despair to hopefulness. Ergot was continued for some days, and the carbolic washings as long as any trace of fetor was found. Recovery was uninterrupted; indeed, it may be said there was no process of recovery, there was only convalescence. Such a progress is not seen in any other form of puerperal fever. The theory of sapræmia accounts for the rapid cure, while the theory of the other forms of puerperal fever explains their gradual advance from bad to worse, or to recovery.

Sapræmia is treated earnestly, even heroically if necessary, with a view to its own cure, and with a view to the prevention of the complications, inflammatory, septicæmic, or pyæmic, which it is very likely to bring in its train. Heroic treatment may be required to reach the remotest part of the genital tract in search for decomposing matter, or to ascertain that there is nothing but putrid lochia in the case. Mere vaginal washing may suffice, or intra-uterine washing, or the volsella may be passed into the uterus to grope for the decomposing structure, or with the same view a finger or fingers may be passed, or even the whole hand; and it may be necessary to dilate the cervix preliminarily. Most of this may be done without an anæsthetic, but where the hand is to be introduced into the vagina, the previous induction of anæsthesia is desirable.

The lotion which I always use is the carbolic, of the strength of 1 in 40, or occasionally 1 in 30. It is used tepid or warm. In conducting the operation it is necessary to be very gentle, to avoid the introduction of air into the passages, and to see that the fluid runs out freely. If the os uteri externum and internum are not widely open, a pipe with double current should be used. The whole proceeding should cause little or no pain, and, for an ordinary washing, a pint or a pint and a half may be passed. But if the discharges are copious and fetid, more may be required, and the rule is to continue the injection so long as it comes away foul or perceptibly fetid. Of course, a bowl is to be so used as to receive all the lotion as it is discharged, in order to save the bed-linen from being wetted. When the uterus is washed out the medical attendant conducts the operation, but vaginal washings may be left to the nurse. The washings are to be repeated from twice to four times a day if the fetor persists in the discharges. After the fetor is suppressed twice a day is sufficient. If the discharges become natural, and if the symptoms of sapræmia disappear, the washings are stopped. In any case they are required only for a few days.

These antiseptic washings constitute the great or essential treatment of sapræmia — a treatment, as already said, so direct in its action, and so successful, that it may be called a cure. Though these washings have been described by ancient authors, and though they were recommended by Harvey and by Baudelocque, it is well known to you that no such practice was in use among us till the antiseptic theory of treatment was promulgated. Yet they are not covered by the antiseptic theory, for you know it was based on the presence of bacteria which passed into the blood, and the antiseptic treatment was planned to destroy them or prevent them reaching the wounded surface. Here we use antiseptics not with these views, but to remove and arrest putrefaction, with a view to stopping the supply of a chemical, not a living, poison, the product of putrefaction, which enters the blood and endangers the constitution.

Besides the washings out, a case may demand many attentions, and cares too varied and too uncertain of occurrence for me to enter on them here. But to one I must allude as probably directly useful. It is the administration of ergot. A drachm of the liquid extract, in divided doses, should be given daily for a few days. The object of its use is to induce permanent contraction of the uterus or uterine retraction. This diminishes the uterine cavity, in which the discharge accumulates; it thus also lessens the surface absorbing the putrid poison, and the contraction of the walls of the organ may to some extent prevent the passage of the fetid fluid along the vessels into the circulation. Of course, should it be desirable, the drug may be given hypodermically, ergotin being used instead of the liquid extract.

Perhaps I have made the pathology of sapræmia too simple; for, in addition to what I have said, it is necessary to add that fetid lochia do not always poison the constitution. They generally do so, but not invariably. They may flow in intense putridity, and yet be apparently not absorbed, as is generally the case. Why the putrid

ichor is in some cases not absorbed I shall not here attempt to explain.

I know no reason why septicæmia and pyæmia should be called *real* puerperal fever, yet this is a common mode of speaking. The simple inflammatory fever, and the sapræmic fever, are not less really fever, nor less really puerperal. Probably the notion arises from the fact that grave cases of fever after delivery are for the most part septicæmic, or pyæmic, and that the great majority of the deaths in childbed is produced by these diseases. There has always, indeed, been a tendency to regard puerperal fever as desperate, or almost certainly fatal. I can remember well the saying of an eminent physician, with whose retrospective diagnosis many agreed, that if a case recovered it was not one of real puerperal fever. Probably he did not mean his words to be held as strictly true, but to express his sense of the hopelessness of such cases. This disheartening opinion should not be entertained, for it is not based on ascertained truth, and it induces despondency and feebleness in treatment which are prejudicial to the thorough management of a case. The pyæmic cases with their embolism, inflammation, and abscess, are more dangerous than the septicæmic, but even in pyæmia there are numerous recoveries. Every one has heard of rare and marvellous convalescence in pyæmia, even after several joints have suppurated; but these are very far from being the only instances. Many less severe cases survive the disease.

I may consider simultaneously the treatment of these two diseases. They are often combined, and their treatment is identical, if we except such surgical interference as is sometimes required in cases of pyæmia, a department into which I do not propose to enter. I have said that pyæmia and septicæmia may be combined, and while this is probably a frequent occurrence, it should also be remembered that all the forms of puerperal fever may be simultaneously present in one case. The separate consideration of simple inflammatory fever and of sapræmia is demanded by their utterly different pathology, and by their distinct indications of treatment. For the inflammatory fever we have some modification of the venerable established antiphlogistic method. For the sapræmia we have the arrestment of the putrid poisoning. For the septicæmia and pyæmia we have no treatment in any sense antidotal or curative in the humblest meaning of that word.

Cases of pyæmia and septicæmia are to be managed rather than treated. The word treatment implies too high an estimate of the physician's powers; or if not too high, at least a too definite view of them. We cannot arrest or even moderate the storm, but we may guide the bark through it. When the organisms producing these diseases are in the blood we cannot kill them, nor do we know any means of certainly controlling their growth. But we may wisely consider the constitutional and local circumstances of the patient, and judiciously interfere to modify them with a view to the patient's survival.

One unsound tree in a forest may be covered with lichen and fungus, and the tree may slowly die, or be killed. But it may survive, and becoming healthy, throw off the morbid growth which endangered it. The organisms of pyæmia and septicæmia find a favourable nidus for development in the weak, the unhealthy, the hopeless, the ashamed, the sad—in those who have been exhausted by a long labour or injured in the course of a severe one. But the attacked do not certainly die. The organisms may grow and grow, and cause death, but they are not necessarily fatal; their growth may be arrested, and they may all disappear. Debilitating and depressing conditions favour their development. Health and strength favour their disappearance. These principles are the foundation of our management; and experience, daily increasing, confirms the conviction that the foundation is not laid on sand.

Good nursing, careful feeding, prudent stimulation—these are the great points. In all of them there is now progressive improvement. While it is impossible to appreciate with any exactness what we owe to these, no one will deny the comparatively great advantages we now gain by them. It would be out of place to enter upon the subject of nursing here. It is no peculiarity of cases of septicæmia and pyæmia to require good nursing, and the subject is specially referred to in connexion with these diseases because, in default of any direct treatment, we specially consider what remains for us to attend to.

On feeding and the use of stimulants I might content myself by making the same remarks as on nursing; but I wish to insist on the great necessity for more attention being paid to the niceties of these important departments. The food and drink should not be left altogether to the nurse. In quality, quantity, and time they should be regulated; and this cannot be done by previously fixed rules, but by directions modified according to the observations daily or hourly made in each individual case. Milk and beef-tea are the staple of the patient's diet, and they may be varied almost infinitely, to suit minor emergencies as they arise. In regard to food, the general rule is to give as much as the patient can take without evident disorder arising from it. It is seldom that too much is taken, for a common difficulty lies in overcoming the aversion to food.

The use of stimulants requires a little more discussion. At present the favourites are brandy and champagne, and I adhere to the general voice in preferring them—on one condition, that they be really good. At the same time I make no objection to other wines and spirits. Brandy and champagne are common and simple, and, for me at least, it would be only an affectation of refinement to appraise the merits of different wines and different vintages. But I am sure that, in regard to all stimulants, our aim should be to use as little as possible. Often, at least for a time, none at all is required. Occasionally, but rarely, in a crisis of weakness, brandy is to be administered largely. Always the principle holds good that too much will do more harm than too little. I am sure that it is a common error to give too much. Excess of food may be passed along the primæ viæ without entailing any considerable injury; not so excess of alcohol. Food is rarely desired by the patient, while she often wishes alcohol; because, as it is given, it assuages thirst for a time and produces at once an agreeable excitement.

A sketch of the treatment of septicæmia and pyæmia would be bald and imperfect if it were confined to the paramount matters — nursing, food, and stimulants. Great attention has to be paid to the general condition and to the state of health as indicated by prominent symptoms. Iron and quinine are now frequently administered, and with great advantage; and what a change of view does this imply if we look back to the days of Gordon, or even of Ferguson? I can well remember the astonishment and unsettlement of mind produced by the recommendation of Hamilton Bell to use the old tincture of the muriate of iron in erysipelas, and I frequently witnessed the earliest employment of the same remedy in the cognate diseases now under discussion, chiefly by the advice of the elder Begbie. It was always the custom to combine bitters with the iron, but now the regal bitter, quinine, is used, not only as a stomachic vehicle, but with the direct purpose of reducing the temperature whose regular observation helps so greatly to guide us now—a chart unknown in the days of Bell and Begbie. Besides quinine and salicin, the influence of cold is now familiarly resorted to to reduce temperature when it rises above 102° or 103°, and this is done with the result of giving comfort and securing probably real gain. Many physicians, Schroeder, Osterloh, and Spiegelberg, in Germany, and especially Playfair in this country, have used the cold bath to reduce temperature when it is very high; but I have no experience with it. Temperature does not long remain high in this disease, varying greatly and often rapidly; and for keeping it moderate, quinine or salicin, in large doses, with regulation of the heat of the room, of the bedclothes, and of tepid sponging, are generally sufficient.

Ice is often taken internally against thirst, and it is a delicious mouthful; but the craving thirst is not relieved. The dose is repeated and repeated in vain. For the relief of thirst, the old remedies, such as toast-water, have more real value. But the urgency of thirst is minimized by the proper management of the case. At least, I can have no doubt that in the days of what I call the excessive use of wine or brandy, or of opium, we heard a deal more of the suffering from thirst than we do now.

Ice is much used to arrest vomiting, which is so common a symptom of the peritonitis of puerperal patients, and it is sometimes effectual. For this distressing symptom remedies are numerous, and their largeness of number is evidence of their uncertain action. The best is of course that most used—the hydrocyanic acid and bismuth mixture, without or with morphia.

With or without sickness and vomiting there may be flatulence, and it is sometimes so great as to embarrass the heart and lungs. In extreme cases relief has been afforded by letting off the air by a small trocar and cannula, but of

this proceeding I have little experience. The remedies which I have found of most use are charcoal, in teaspoonful doses, given in water once or twice daily; or turpentine, in ten-drop doses, given in water or some simple vehicle, three or four times daily.

The hot linseed-meal poultice is almost always a grateful and useful application to the hypogastric region, relieving pain and promoting the lochial flow. Besides, when the skin is hot and dry it is a valuable diaphoretic.

Opium in some form is invariably administered, and almost always with advantage. Occasionally, indeed, it produces great mental disturbance and uneasiness, or vomiting, or dryness of tongue; and, in such cases, if a change of the preparation does not bring better results, the medicine may have to be given up, or used only to produce sleep. Indeed, apart from any injurious effects, it is often a good plan, when pain is not urgent, to give it only to secure a good night. But generally it is given repeatedly during the day, either to relieve pain or with a view to its soothing and supporting rather than narcotising action.

Opium and other remedies are also often used against diarrhœa, and in this way much good may be done. But it is necessary to pay much attention to this purging, generally of thin highly coloured dejecta, for undoubtedly it often should be encouraged rather than checked; and, perhaps fortunately, it is often not easy to check it. The physician should see all the motions, so as to justly estimate their quantity and character, and he should not regard it as his duty to try to check free and even copious evacuations, or to get the stools in a formed state. He will be guided in his judgment on this point by the strength of the patient and the amount of food consumed.

During the whole course of the disease the regular flow of the lochia is anxiously looked for; and should they be suppressed, an attempt is made to bring them back by hot fomentations to the vulva and hypogastrium; for it is naturally regarded as desirable that there should be lochial discharge, and that it should not be retained. But besides its mere flow, the character of the discharge, especially as to fetor, is scrutinised. If there is fetor there is probably sapræmia complicating the septicæmia or pyæmia, and this fetor is treated by antiseptic lotions, as already described. But fetor of discharges forms no part of septicæmia or pyæmia. The bacteria or micrococci of these diseases flourish when there is no fetor. At present, however, such is the enthusiasm for antiseptics, that it is considered desirable to have the womb well washed out once or twice daily by carbolic lotion, even when there is no fetor; and meantime I consider it good practice to do this twice daily while there is urgency, if the discharges are not quite healthy in all respects. The intra-uterine washing cannot work upon the infected blood circulating everywhere in the body, and carrying with it the baneful organisms, but it can keep the wounds clean; and, if the womb or vagina is a nursing-ground for farther supplies of these organisms, then by the antiseptic washing the nursery is destroyed. The farther supply of the contagium vivum is stopped, for the micrococci are killed by the carbolic wash.

Such, gentlemen, is an outline of the treatment of a group of terrible diseases. How imperfect it is no one can feel more strongly than I do. It is not a fixed treatment, but the treatment of to-day. Were I the wisest therapeutist and had I the best rhetoric, my description would still be imperfect; for no one can describe, with a near approach to perfection, what is imperfectly known and very dimly understood. But the variations of health and constitution, of complications, and of other conditions, are so numerous that a perfect theory or system of treatment would not carry with it directions for every individual case. Boundless scope, after all, would be left for intelligent interference of the practitioner warmed into zeal by a kindly sympathising heart.

Meeting with these puerperal diseases, the practitioner dare not fold his hands in apathy and inaction on account of the incompleteness of his knowledge. No one would listen to him were he to proclaim that all our experience and all our laboriously acquired information had yielded no fruit for the benefit of suffering women. He is face to face with great and terrible danger, yet his position is not one of imminent peril to himself as in the case of a soldier, who, like him, has to meet unexpected combinations and unforeseen difficulties, and who, whether he has little or much knowledge, must act and that at once, for in boldness there is safety, in delay there is only disaster; and experience has amply demonstrated that no case is to be utterly despaired of till the moribund state supervenes, however severe and complicated it may be.

We have said that puerperal fever affects especially the weak, the unhealthy, the hopeless, the ashamed, those who have been exhausted by a long labour or injured in the course of a severe one; and there is no need to expatiate on the great field here opened up for the benficent activity of the physician. To strengthen, to heal, to encourage, to console, to manage labour, to reduce injuries to a minimum, are all objects to be kept in mind; not indeed with a view only to the treatment of puerperal fever, but in order to its prevention. It is a trite saying that prevention is better than cure, and I think there can be no doubt that more suffering is avoided and more lives saved on this principle than by treatment; and I feel impelled to say a few words on this subject.

The prevention of simple inflammatory and of sapræmic fever demands no special consideration here; it is the prevention of septicæmia and pyæmia, or of contagious puerperal fever, that is generally in view when prophylaxis is spoken of, and few subjects are at present more discussed. The late trials of midwives for spreading puerperal fever, and the reiterated attacks on maternity hospitals, are familiar to all; and I believe all will admit that we want much more light and more wisdom in our dealings with these matters. They are not identical, for the propagation of puerperal fever in a hospital involves considerations which have no place in its propagation in a private or out-of-door dispensary practice. Hospitals are the seat of endemics of fearful character. The house becomes tainted, and every lying-in woman in it is in great danger from the infection. Fortunately, the infection does not become so intense as to affect all, but such a degree of intensity is quite conceivable. In an ordinary dairy no vessel of milk escapes the action of the bacterium lactis; every dish becomes curdled. In home practice the infection reaches patients only sporadically; the disease, however, occasionally dogging the footsteps of an individual practitioner. There are no epidemics, no prevalence of the infection over countries. A lying-in woman can easily find a safe home. The analogy of the curdling of milk does not apply here, for it is difficult to find a place where there is no bacterium lactis where milk does not curdle.

Against the dangers of both hospital and home practice we find some degree of protection in antiseptic midwifery, a great practical subject which I have discussed in an address lately given to the Medical Society of London. Antiseptics have, as yet at least, but little to do with the treatment of the infectious forms of puerperal fever; they avail greatly in the prophylaxis. This has been well exemplified in the case of hospitals. In private practice the protective power is not so easily demonstrated; yet I believe the plan is there also invaluable, rendering the patient comparatively safe and practically excluding all danger of infection by the careful accoucheur.

Ventilation and cleanliness were, up to the present time, the great resorts of medicine against endemics of puerperal fever, and they had little and only temporary effect. They are, however, even now justly valued very highly; but, with antiseptics, we come into closer quarters with the enemy we have to subdue, and have a weapon of greater potency, and consequently we have more success. In spite of all our prophylaxis, however, puerperal fever prevails. The enemy succeeds in the attack and the physician has to make every effort to rescue his patient by treatment.

Although we have at present no prospect of being able to stamp out the infectious forms of puerperal fever or of reducing them to comparative insignificance, there is yet, even as to the attainment of these great ends, some ground for hope arising from the success of scientific investigations. Vaccination seems destined only to a brief further protraction of its splendid and useful isolation and of the mystery of its operation. The results of Pasteur's researches on the cholera of the domestic fowl and of Toussaint's and Greenfield's on anthrax show how a contagium vivum may have its potency diminished, or nearly annihilated, by methods having a strong analogy with those employed to reduce the potency of the variolous contagion. If one contagion can be so modified, we are led to ask, Why may not also that of puerperal fever be likewise? There are other researches by Greenfield and Buchner which justify the philanthropic hope that with lapse of time the deadly characters of the organisms of septicæmia and pyæmia may be changed into others more innocent. Such anticipations are little more than mere indulgence of the scientific imagination; but

they are far from being useless or foolish, though to the merely practical man they may appear so.

The ideas suggested by the researches of Pasteur, of Toussaint, of Greenfield, and Buchner may prove to be mere *ignes fatui*, but they may, on the contrary, prove to be true guides. It is by following out such ideas, verifying or disproving them by new investigations, that progress is made in science. Progress in science is a fountain of purest pleasure to its promoters and of widespread beneficence to mankind.

The Society whose new session I have the honour to inaugurate is devoted to the advancement of science, and I dare in conclusion to suggest to every busy medical man here that he should make some department of it, perhaps a very small department, his peculiar study. By so doing he will keep a special perennial joy in his life of toil: he will be, if not a discoverer of new truth, at least a diffuser of it; he will be a useful and honoured member of this Society, he will contribute to the elevation of medicine into a more and more useful profession, and of his medical brethren into a higher and higher position.

The healthy and diseased human body is not the greatest matter in the universe of things. Our profession acknowledges that there are others to whom, in respect of the value and grandeur of its aims, it willingly bows. But medicine offers more than sufficient scope for the greatest efforts of the greatest minds. It is for us to contribute to its prosperity and progress. *Floreat res medica.*

Address
AT THE
OPENING OF THE ANATOMICAL DEPARTMENT
IN THE
NEW BUILDINGS OF THE UNIVERSITY OF EDINBURGH.

Delivered October 27th,

BY WILLIAM TURNER, M.B., F.R.S.,
PROFESSOR OF ANATOMY.

WE meet together this morning on an occasion which will be for ever memorable in the history of this University and of the Chair of Anatomy. We inaugurate that portion of the new buildings of the University which is to be devoted to the study and teaching of anatomy, and in celebrating the accomplishment of the first stage of the great task of providing new buildings for the accommodation of the Faculty of Medicine, we may congratulate ourselves upon entering into the occupation of apartments which, in their spaciousness and the convenience of the arrangements they provide for the purposes for which they are designed, are unsurpassed in the British Empire.

It is now about ten years since the authorities of this University began seriously to consider the necessity of extending the buildings. Various causes had combined to make this a necessity; a considerable increase in the number of professors and in the subjects taught since the existing buildings were erected, requiring an addition to the number of class rooms; an annual growth in the number of students, causing the class rooms to be too small to give the proper accommodation; a complete change in the character of the teaching of many of the subjects, more especially those of medical study, owing to the development of practical methods of instruction, and the inefficiency, both as regards number and size, of the apartments used for that purpose; the natural growth of the museums of the University, which by the accumulations of years had outgrown the space allotted to them.

At the first it was thought that, if new buildings were provided for the large departments of anatomy and chemistry, a sufficient amount of space would be set free in the existing buildings for the accommodation of the other subjects of study requiring an extension of room. On further inquiry, however, the Senatus became satisfied that the needs of the various departments could not in this way be properly provided for; and, after a full consideration of all the circumstances, it was decided that the proper course to take was to devote the existing University buildings to the services of the faculties of arts, divinity, and law, and to transfer the medical faculty to a new building, which would at once afford sufficient accommodation for lecture rooms, museums, laboratories, and other apartments for practical work.

The question of a site for these new buildings had then to be settled, and as it had been decided by the managers of the Royal Infirmary to remove that great institution to the site on which it now stands, the ground on which it then stood was looked upon as suitable for the purpose. Accordingly negotiations were entered into to acquire the old infirmary site for university purposes, but in the course of time the negotiation fell through, and it was fortunate that it did so. For if this scheme had been carried out, then the construction of the new buildings of the University could not have been commenced until the present year, after the managers had vacated the old infirmary; and if they had been constructed there, then the medical school of the University would have been at an inconvenient distance from the new infirmary. It was therefore resolved by the Senatus to acquire, if possible, the ground of Park-place and Teviot-row, and the means of effecting a considerable portion of that purchase was provided by a bequest of the late Sir David Baxter, who, in this as in so many other matters, proved a wise and liberal benefactor to the University.

A subscription was then set agoing to procure funds for the purchase of the rest of the site, and the erection of the buildings thereon; and through the exertions of a committee of public-spirited citizens, presided over by the Principal of the University, for whose services in the promotion of this great work we must for ever feel deeply grateful, and having as two of its most zealous members the late and the present Lord Provosts of the city, a sum of about £80,000, in addition to the Baxter bequest was raised. The Government was then appealed to for assistance, and a grant from the Treasury of £80,000 was obtained.

Whilst these important financial arrangements were being made, the architect, Mr. R. R. Anderson, was preparing the plans. The instructions that he received were to provide each subject of medical study with a distinct lecture theatre, and with rooms for practical study appropriate to the teaching of that subject; that the rooms should be spacious, well-lighted and ventilated, and conveniently arranged; that there should be a large anatomical museum, and that the departments of anatomy, surgery, pathology, and practice of physic should be grouped around the museum, so as to have convenient access to it for specimens. Two years ago the foundations of the building were begun, and now we welcome you in the department which has first been completed. How well the architect has accomplished his task, an inspection of the rooms devoted to anatomical teaching and study will show you, and you will not fail to see that he has set this and the other departments in a casket of stone of which the University may feel proud to be the possessor, which is an ornament to the city, and a witness to the truth of the saying that "A thing of beauty is a joy for ever."

And now, gentlemen, let us take a rapid survey of the origin of the school of medicine of this University, which dates from the first quarter of the last century—a period which marks also the rise in a more or less complete form of medical schools in several of the other universities in these islands. Up to that time, as was not unnatural, when we consider that so many of the universities either owed their existence to papal bulls or were modelled under their influence, these academic institutions had been almost exclusively regarded as training-schools for ecclesiastics and for promoting the study of theology. But at the beginning of the last century a great national awakening to the need of instruction in other departments of knowledge took place, which led in this University to the institution of the faculties of both medicine and law

It is true that lectureships and professorships of medicine had been founded in many of our universities at an earlier period. In Aberdeen, for example, a "Mediciner" was appointed so long ago as 1322. In Oxford and in Cambridge regius professorships of physic had been founded by Henry the Eighth about the middle of the same century. The pro-

fessorship of physic in Trinity College, Dublin, dates from 1618. Professors of medicine were also appointed in this University in 1635, but it does not appear that they ever attempted any systematic teaching.

It is impossible, indeed, for a school of medicine to have vitality until provision is made for teaching anatomy, and it was not until the beginning of the last century that distinct teachers were appointed in the universities for imparting instruction in that subject. A chair of anatomy was founded in Cambridge in 1707; one in Glasgow in 1718. In Dublin an anatomical theatre was built in the University in 1711, in which lectures on anatomy, chemistry, and botany were delivered, and in 1784 these lectureships were converted into professorships.

Efforts had been made during the last ten years of the seventeenth century by the Incorporation of Surgeons of this city to provide for their members and apprentices instruction in anatomy, and an anatomical theatre was built for that purpose; but it does not seem that the lectures and demonstrations were delivered regularly, and the conditions under which the instruction was imparted threw many difficulties in the way.

In 1705 the Town Council of Edinburgh, then the patrons of the University, allotted to Robert Elliot, surgeon, who held the office of public dissector of anatomy to the Incorporation of Surgeons, the sum of £15 of yearly salary, as an encouragement to pursue the teaching of anatomy. This is the first record of the introduction of the study of anatomy into the system of teaching in this University. In 1708 the Town Council appointed Adam Drummond "to be conjunct professor of anatomy with Robert Elliot, chirurgeon apothecary and present professor thereof." It is doubtful, however, if either of these professors, or John M'Gill, who succeeded Elliot in 1716, did more than give occasional demonstrations on the anatomy of the human body. The commencement of the medical school as a definite organisation for affording systematic instruction in anatomy and in other departments of medical study, dates undoubtedly from the appointment by the Town Council in 1720 of Alexander Monro, *primus*, to the chair of anatomy in this University. In the beginning of the winter of that year he delivered a regular course of lectures on anatomy and surgery, and during the same session Monro induced Dr. Charles Alston to lecture on materia medica and botany. In 1726 Drs. Plummer and Innes were appointed to the chair of chemistry, and Drs. St. Clair and Rutherford to those of the practice of physic and the institutes of medicine; and immediately after their appointment all these gentlemen began to deliver regular courses of lectures. The medical school was now very completely organised according to the requirements of the time, so far as regarded provision for the delivery of lectures on the chief branches of a medical education. But an infirmary for the practical study of disease was still wanted to give completeness to the system of instruction. A scheme was therefore proposed by Monro's father and the members of the Royal Colleges of Physicians and Surgeons, for raising a subscription and building a hospital for the reception of the sick. Monro himself, in conjunction with the Lord Provost Drummond, actively promoted the work, and in a short time a hospital was provided. How thoroughly these founders of our medical school had grasped what was essential in a training for the practice of our profession is shown by the way in which they utilised the infirmary after it was erected; for Monro frequently gave lectures on the surgical cases, whilst Rutherford began in 1748 to deliver clinical lectures on the most remarkable medical cases in the wards.[1]

Monro had been specially trained under the guidance of his father—one of the great objects of whose life was to develop a school of medicine in Edinburgh—to become a teacher of anatomy. His success was marked from the beginning, and gave proof of his ability as a teacher, as well as of the need that existed in Scotland for the establishment of a school of medicine. From his class-lists, now in the possession of the chair of anatomy, I find that he began with 57 students, and that the class gradually increased, until, in 1744, 150 students attended his prælections. Owing to the political troubles of 1745 the class fell that year to 76, but in the following year it rose to 182, which was the maximum number it attained during his incumbency of the chair.

The seed which had been sown by the founders of the school fell upon good ground, and under the fostering care of Alexander Monro, *secundus*, and of his able colleagues, Robert Whytt, William Cullen, Joseph Black, John and James Gregory, and Andrew Duncan, it became a stately tree. A great increase took place in the number of students attending the medical classes in the latter half of the last century, who were attracted in large numbers from England, Ireland, and the Colonies, and in consequence of that increase the buildings of the University with which you are all familiar on the South Bridge, were projected, and in the course of time constructed. From the records of the anatomical class I find that the pupils of the second Monro, whose reputation as a teacher and investigator was even more renowned than that of his father, numbered for many years between 300 and 400, and that in 1783, 436 students attended his class.

In the earlier half of the present century the school as a whole continued to prosper, although, from the circumstances of the anatomical chair, the number of pupils in attendance on that class was much diminished. With the appointment in 1846 of John Goodsir, one of the most philosophical of modern anatomists, to the chair of anatomy, an important revival took place in the character of the teaching, the class once more assumed a foremost position in the school, the students greatly increased in numbers, and in 1852–53 mustered 368 pupils.

The appointment of a Royal Commission in 1858, under the presidentship of one of the most sagacious of living Scotchmen, the present Chancellor of our University, effected a great change in the constitution of the University and in the regulations for graduation. By the ordinances of that commission a preliminary examination in arts for medical students was rendered compulsory, the board of examiners was organised on a wider and better basis, the degrees of M.B. and C.M. were instituted, and the degree of Doctor of Medicine was ordered not to be given until candidates had reached the age of twenty-four years.

The immediate effect of these ordinances was undoubtedly to diminish the total number of students of medicine frequenting the University, which fell in 1868–69 as low as 403. For it required a few years to bring the education imparted in the schools into harmony with the requirements of the preliminary examination. When this was, however, established students once more began to flock to Edinburgh, and from 1869 to the present date a yearly increase has been going on, not by slow degrees but by leaps and by bounds, until in the last academic year the total number of students of medicine reached 1253. In the general prosperity of the school the class of anatomy has participated, for 679 students were enrolled as members of it during the last winter session. Under the influence of these ordinances the prestige of our medical degrees has been very materially increased. By the institution of the preliminary examination, conducted by the same examiners as for the degree in arts, the entrance of illiterate persons has been prevented, and the tone of our students and graduates has been elevated. By the widening of the professional examining board and the admission of a number of non-professorial examiners equal to that of the professorial staff, the character of the examination has been raised. By the power given to the Senatus to administer the affairs of the University numerous improvements and additions have been made to the educational arrangements.

It may not be without interest to inquire how it was that, whilst during the last century important schools of medicine arose as parts of the educational machinery of the universities in Edinburgh, Glasgow, and Dublin, yet that no corresponding development occurred in the great English universities in Oxford and Cambridge.

In a presidential address delivered in August last at the annual meeting of the British Medical Association in Cambridge, Professor Humphry related the circumstances which in his judgment repressed the formation of medical schools in the two ancient English universities. He placed in the front rank of antagonistic causes the proximity of Oxford and Cambridge to London, which from its greater wealth and the more abundant opportunities that it afforded for study attracted the practitioners, teachers, and students of medicine; also the influence exercised by the powerful com-

[1] The authorities for this summary of the rise of the Edinburgh School of Medicine are the Memoir of Alexander Monro, *primus*, prefixed to his collected writings; the Histories of the University of Edinburgh, by Bower and by Dalzel; Dr. Gairdner's Historical Sketch of the Royal College of Surgeons of Edinburgh, and his Sketch of the Early History of the Medical Profession in Edinburgh; and most fully in Professor Struthers's Historical Sketch of the Edinburgh Anatomical School.

peting Corporations of Physicians and Surgeons in the metropolis, which had power to grant licences to practise.

But in connexion with this argument I would point out that powerful medical and surgical corporations were not and are not confined to London, but that similar institutions, exercising large local influence, possessing many privileges, having the power of licensing, and up to a recent period even a monopoly of granting licences to practise in certain districts, were and had been for many years established in Dublin, Edinburgh, and Glasgow, and yet the medical schools connected with the universities in those cities grew and flourished.

One cannot doubt, if there had been a university in London when the national demand for an improved medical education arose in the beginning of the last century, that in England, as in Scotland and Ireland, competent professors would have been appointed in it as parts of its educational machinery, and a medical school of influence and renown would have been created. The scientific and practical training of the medical practitioners in England would not have been left to the private enterprise of the physicians and surgeons attached to the London hospitals, but would have centred in the university, whilst the hospitals would have been adjuncts to it as places of clinical study.

England suffered therefore, as regards medical education, a great loss from not having had a metropolitan university during the last century. And when one was founded during the present century, it was established on so peculiar and exceptional a basis—as a mere examining board—that it provided no educational training, and has exercised therefore little if any influence upon the education of the great body of practitioners. Hence there has arisen in the minds of many Englishmen a conception of the relations of the universities to medical education, and to the medical practitioner, which to us in Scotland seems quite erroneous. They look upon a university training as not intended for the profession generally, but as an especial privilege of the select few. We, on the other hand, hold that the more you bring the great body of the profession into relation with the thought and culture and scientific methods of our universities, the wider and more precise will be the basis on which to found rational methods of practice, and the more will our profession advance in the estimation of the public.

But other causes than proximity to a great metropolis and the influence of powerful medical corporations tended to repress during the last century the development of medical schools in the two ancient English universities. In them much longer than in Scotland did the idea prevail that their primary function was to train ecclesiastics. The system of each of these universities, which practically gave the control over the education, not to a body of professors, but into the hands of the fellows and tutors of the different colleges; the semi-monastic life imposed on the resident fellows, so many of whom were required to enter into holy orders; the valuable endowments attached to the different wealthy colleges conferred as prizes on those who entered the Church as a profession—all tended to keep the system of education in a particular groove, and to check its expansion. But, further, the imposition of a religious test, both on teacher and student; the necessity of having to reside in a college, with its attendant expenses; the absence, in England, of such a complete set of parochial schools as prevailed in Scotland, in which the child of the peasant could obtain the rudiments at least, and in many schools much more than the rudiments, of a training in classics and mathematics—excluded from the English universities a large body of the nation, and restricted their privileges to members of the Established Church and to the wealthier classes of the community. There can be no doubt that the expense and other difficulties which beset the path of so many young Englishmen in obtaining a university training and degree in medicine in the southern division of the island, sent them across the border to Scotland, and contributed in no small degree to the prosperity of the Edinburgh school of medicine.

It required the freer light and air, and the wider conception of the relations of a university to the life of a nation, engendered by the progress of knowledge during the present century, to break down the long existing exclusive system of the English universities, and to bring them into closer contact and sympathy with modern thought and work. During the last twenty-five years a considerable addition has been made to their staffs of professors, and educational duties have been required of them; tests have been abolished; a non-collegiate system of residence has been sanctioned; endowments have been thrown open to a wider range of persons; museums, laboratories, and other means and appliances for affording instruction in the sciences have been constructed and obtained; the curriculum for the degree of Bachelor of Arts has been remodelled, and a much greater latitude as regards the subjects both of education and examination has been granted to candidates. Medicine and the sciences on which it is founded have shared in these improvements. Unquestionably the small population of the districts in which Oxford and Cambridge are situated, and their proximity to London, will always throw impediments in the way of a development of the practical and clinical parts of a medical education; but the undergraduates of these universities who intend to enter on the study of our profession, have now the opportunities of being trained in the fundamental sciences on which the practice of medicine is, or ought to be, based, and in Cambridge provision is also to some extent made for imparting a knowledge of the more advanced subjects of professional study.

(To be concluded.)

THE INFECTION OF PHTHISIS.

BY REGINALD E. THOMPSON, M.D., F.R.C.P.

THERE are many questions in medicine which have long engaged the attention of the profession and caused such a division of opinion that authorities will be found ranged in two opposite camps in equal numbers, holding diametrically different views regarding them; and among such open questions the contagiousness of phthisis may be classed as one which has been affirmed by some and denied by others at all times of the world's history.

It is indeed a very old question, for it was advanced by Aristotle and answered in the affirmative by him and Morton, and many others; but authorities of equal weight and number can readily be found who have taken the other side, and given a direct negative to such a possibility.

Upon this subject opinion still remains strangely hesitating, more especially in temperate climates; and it is curious to note how far more positive are the views of those who have made their observation in warm climates—a difference of opinion which requires some explanation, and may perhaps lead to some further elucidation of the problem.

In Italy quarantine regulations used to be enforced regarding deaths from phthisis, and, acting upon such regulations, innkeepers and others have been wont to levy a heavy tax for cleansing and disinfecting rooms where the consumptive patient has been; while in India, if my information be correct, such patients are considered almost as dangerous as lepers used to be under the Mosaic sanitary laws, popular opinion compelling even the washing of cups and platters that have been handled by them.

The arguments brought forward to support the idea that phthisis is contagious have been derived mainly from facts showing that individuals in intimate relation with each other have been successively attacked with phthisis. But such evidence, which simply depends upon a numerical probability, cannot be considered a satisfactory way of solving the problem, for the few cases which can be brought forward by any observer are not sufficient to remove the chance of mere coincidence for so common a disease as phthisis, which it must be presumed will be found affecting individuals in close relation to each other (e.g., husbands and wives, brothers and sisters) in succession in a certain proportion of cases. This kind of argument is not likely to be convincing. The remarkable series of cases, however, which have been published by Dr. H. Weber advance the question a step further, for it can scarcely be considered within the pale of chance that several wives of a consumptive husband should successively fall victims to pulmonary disease. But, from the experience of some years, I believe that the subject may yet be approached from a different point of view, and I would appeal not to the numbers in which pairs of individuals may be successively attacked by disease, but to special features, clinical and pathological, which mark the infective disease, and which distinguish the transmitted disease from ordinary forms of phthisis.

The proposition which I shall venture to advance is this:

That infective phthisis (by which term may be designated that form of disease which results from the infection of phthisis) is a disease which has peculiar symptoms and signs of its own serving to distinguish it from phthisis, and approximating closely to those of a pyogenic or infective pneumonia.

If this proposition can be established, then I think it must be admitted that the question of the possible communication of phthisis will have received a more satisfactory answer than when arguments are drawn from the numerical point of view. Of late years experiments on animals have been largely appealed to with regard to the nature of phthisis and tubercle, but inasmuch as I believe that the artificial disease differs materially from phthisis as it appears in man, I have no intention of pressing the results of such experiments into the argument, nor of appealing to them, although I could do so with some effect, to help me in a difficult question.

The observations upon which the following conclusions are based extend over a period of ten years, and are derived from a total of twenty-five thousand patients: the series of cases to which special attention has been directed are those of wives infected by husbands, inasmuch as the possibility of error arising from blood relationship is hereby avoided, and the association of the nursing wife with the sick husband is so constant and intimate that if phthisis can be communicated it must be looked for in such instances.

Fifteen well-marked examples of this kind have come under notice out of something like fifteen thousand cases of phthisis, so that the proportion of infective cases may be reckoned as not less (probably a little more) than one per mille; hence it is easy to understand why observers, with a small number of patients, should disbelieve the possibility of contagion. I have, however, rejected from the series cases which might have been included, but in which the symptoms were not so acute and distinctive, and which may eventually prove to be chronic or subacute forms of that disease, which was manifested in an acute form in the fifteen selected cases.

Grouping all the cases together and analysing the symptoms and signs which characterise them, I would advance the following conditions as serving to identify the disease and to distinguish it from ordinary forms of phthisis.

1. A slight hacking cough appears to be the earliest symptom of infection, and I would suggest that this is an indication of the irritation of the air-passages, due to the introduction of the *materies morbi* through their agency.

2. Symptoms of constitutional poisoning are at once shown by the rapid emaciation which is noticed by the patient in a very early stage of the disease.

3. As the disease progresses, rigors, accompanied by night sweats and pyrexia, occur at frequent intervals.

4. Later on the cough returns, considerably aggravated, and sputa are from time to time tinged with blood. Hæmoptysis to a small amount occurs, but is not frequently repeated.

5. The physical signs are usually bilateral, although not necessarily exactly uniform on both sides.

6. The pulmonary disease is disproportionate to the amount of constitutional disturbance, and is not sufficient to account for the extreme emaciation of the patient.

7. The physiognomy of the patient is not that of phthisis, and the colour of the skin is of a dull sallow hue, far different from the pallor which is so marked a feature in the consumptive patient.

With regard to the character of the physical signs, even after the patient has been ill for many months I have generally not been able to make out more than a few subcrepitant or crepitant râles, diffused, and of a somewhat peculiar character, in both infra-clavicular regions; but one lung may be attacked before the other, and, consequently, in some cases, and late in the disease, a cavity may form.

It is difficult by a mere description on paper to enforce differences which mark the features of a particular disease with the same impressive distinction with which clinical experience stamps them, but I will make the attempt in the following case, which may be taken as a fair sample of the disease under consideration:—

A widow, aged twenty-seven, presented herself for examination under the following circumstances: There was no history of consumption in her family, nor could I elicit any facts to show that she had been delicate or liable to cough before. Her husband had suffered from symptoms of rapid phthisis (cough, sweats, and diarrhœa) some months before marriage, and, finally, died of phthisis nine months after marriage. During these nine months she was his constant companion and only nurse, and although warned of the danger, had slept with her husband up to the day of his death. There was no offspring from the marriage. Three months after marriage she began to suffer from a slight hacking cough (which she was quite unable to trace to cold), accompanied by rapid loss of flesh. The constitutional symptoms became aggravated; the emaciation speedily increased, and was accompanied by a succession of rigors with night sweats of a marked character. These were associated with dull aching pains all over the body. Six weeks after the death of the husband the cough returned with considerable exacerbation. Much expectoration, occasionally streaked with blood. Slight hæmoptysis was noticed. With these symptoms there was a return of night sweats, and subsequently diarrhœa set in.

When she presented herself for advice her illness had lasted sixteen months (her husband having been dead thirteen months). She was extremely emaciated and worn, her face thin and drawn; her complexion sallow, of a dull ochry hue, and her aspect was far more like a patient suffering from pyæmia than from pulmonary phthisis; the skin was hot and dry, and the pulse rapid (124). The following were the physical signs. Her chest was well formed, but thin; there was no local retraction or depression. Diminished resonance of percussion was found under both clavicles from the first to the third ribs in front, and the same sign was found over the supra-scapular fossæ. Auscultation showed the presence of some diffused, viscid, crepitant râles, confined to the end of inspiration from the first to the third ribs, in front, on the right side; fewer in front on the left, but harsh respiratory murmur and subcrepitant râles over the left supra-scapular fossa.

If it had not been for previous experience of similar cases, and for the limited pulmonary disease indicated by the above signs, I should have almost despaired of a favourable termination to the case, so great was her emaciation and want of vigour, more especially as she had for some time been unable to take cod-liver oil, and was at the time under most unfavourable conditions of climate. However, she improved with the use of iron and maltine; she gained flesh. The physical signs cleared away, and in four months she was restored to health; and when I last heard of her she continued well, and was about to return to America, the home of her husband's relations.

The other cases which I have in my note-book, although not so complete as this, have the same distinguishing features, and point to the same conclusion, that the disease is not a true phthisis, but in all points resembles a condition of pyogenic pneumonia or pyæmia.

But it will naturally be asked, What pathological evidence can be adduced in support of these surmises with regard to the nature of the disease? The following case, in which the symptoms and signs during life were made by an independent observer, and closely coincide with those of the case I have already detailed, is the only one to which I can appeal, but the pathological conditions are very decided, and quite distinct from those of phthisis. The patient was under the care of Dr. Williams, and I am indebted to his courtesy for permission to use the case.

A widow, aged thirty-nine, was admitted into hospital in August, 1878, with the following history and symptoms. No history of inherited predisposition to phthisis in any of her family could be obtained. Her husband had suffered from phthisis, and after a family of eight children (one of whom had died of phthisis, the others being all reported phthisical) had been born to them he died of that disease; the exact date was not given. Sixteen months before admission the woman began to suffer from a hacking cough (not traced to cold) and emaciation of a marked character. After eleven months' illness she had a slight attack of hæmoptysis, blood being mixed with the sputum; diarrhœa followed, and during the time she was in the hospital she suffered from rigors and night sweats.

The physical signs noted were diffused crepitation over both lungs, most marked at the lower half anteriorly.

In October she was attacked with pleurisy, and in November the right lung broke down, and a cavity formed. Three weeks before death she had phlebitis, with an erysipelatous blush over both forearms.

The post-mortem examination which I made at the end of December, 1878, showed a very peculiar condition of things. The left lung was adherent at the upper half, and the lobules were found stuffed with a caseiform material, the

bronchioles being pigmented at their bifurcation, producing a peculiar appearance, as if a big V was stamped or painted in the middle of each lobule. The lower portion of the lung was in an earlier stage of disease—a hard congestion of a patchy character being presented to view, resembling an infective pneumonia. The right lung was completely adherent except at a space at the lower anterior portion, where there was a small collection of recently formed pus. The condition of the lung was similar to that of the left, but the disease had progressed farther, and the caseiform material had broken down, leaving a cavity of the size of a Maltese orange. At first I could find no tubercle, but on careful search two racemose groups of recent tubercle were found below and in close proximity to the cavity. The spleen was pale, small, soft, and diffluent, and resembled the pyæmic spleen. The lungs were carefully examined microscopically; and, naturally anxious to have my views corroborated, I submitted sections to Dr. Klein, who was good enough to examine them, and expressed the opinion that they indicated an infective pneumonia.

I must remark with regard to this case that I have never come across a case of ordinary phthisis which at all resembled it, and although I have been on the alert for indications regarding the nature of the clinical symptoms which appear to mark cases of acute infection, I have not had an opportunity of investigating any other case of the kind. If further observation should corroborate this evidence, it would, I think, lead to the conclusion that phthisis in its power of communicating disease must be looked upon not as a zymotic disease capable of sowing itself, and reproducing the same form of disease, with identical symptoms and signs, but rather as an ulcerative process capable of giving rise to pyæmia. This view of the infection of phthisis would induce less terror than the notion that it was a contagious disease in the generally accepted view of the term, and prevention might be expected from simple measures of hygiene, especially free ventilation of the patient's room. Such means might reduce the risk of infection to a minimum without preventing that assiduous care and attention which alleviates and soothes the last days of the dying invalid, and the devoted wife need not fall a victim to her duty and ministering care.

It may perhaps be necessary for me to state that cases come under observation with a history of possible infection of which the symptoms are less marked and intense, and in which the pulmonary disease is not distinctive enough to constitute a diagnosis. How far such cases may be classed with those acute and intense forms of disease which I have attempted to describe, and how nearly they may resemble ordinary phthisis, is a matter which will have to be decided by the features of each individual case. I wish especially to guard against the supposition that in all cases of infection the form and progress of the disease must assume the same strikingly marked features which appear to characterise the acute and intense form of the infective disease.

REMARKS ON STRICTURE OF THE URETHRA IN CONNEXION WITH INTERNAL URETHROTOMY.

By SURGEON-MAJOR T. J. McGANN, I.M.D.,
CIVIL SURGEON, MYSORE.

THE gist of my communication lies in the fact that in several bad cases of stricture which have come under my care recently, I have at once, without any previous efforts to treat them by gradual dilatation, resorted to internal urethrotomy, and with very satisfactory results so far. The instrument I have used has been that of Mr. Teevan, which was described by him in March, 1878.

The natives of India are, as a rule, very reluctant to seek treatment for stricture, and will go on without such as long as they can pass urine, even in a very small stream, or squeeze it out drop by drop, and so relieve themselves for the time; and hence cases of extravasation, with sloughing of scrotum and perineum, are not uncommon, and less so still are bad strictures. It is, therefore, with the worst class of cases that one has, as a rule, to deal with, and even these rarely come to hospital until actual retention has occurred, with probably an over-distended bladder and rupture of the urethra imminent, so that prompt measures are demanded. In Indian hospitals the supply of catheters and bougies is limited, and as they rapidly deteriorate from climatic causes, and become inefficient after very little use, and as it is the small sizes which are most frequently used, surgeons often find themselves with nothing but large ones in hand. I have, therefore, on occasions felt anything but pleasure at being called on to treat an urgent case, with perhaps a bladder distended to the umbilicus, a tight tortuous stricture, impassable to any instrument within my reach or obtainable in a reasonable time, aggravated, perhaps, by an indurated distorted condition of perineum. Under circumstances such as those enumerated, and with no very small instruments available, it will be readily conceived that puncture of the bladder has had frequently to be resorted to to relieve present urgent symptoms, and as a preliminary to other treatment; and although I have hitherto found puncture per rectum a perfectly safe operation, it will be admitted that it is undesirable to have recourse to it as a routine measure in every bad case of stricture that comes under treatment, albeit it gives time and admits of good results being achieved afterwards.

About a year ago I procured, through my friend Dr. Macgrath of Bayswater, Mr. Teevan's urethrotome, for a bad stricture complicated with numerous fistulæ, which, after much trouble, I dilated up to No. 11, English, but which contracted again very rapidly, notwithstanding the occasional introduction of the full rigid instrument by the patient, and two of the openings never completely healed. After the free use of the urethrotome in this case the fistulous openings healed, and there was no tendency to further contraction.

The following are the cases previously alluded to in which urethrotomy was performed (from notes by Mr. Apothecary Costello):—

CASE 1.—Beeram Saib, Mahomedan, age thirty-five, admitted to hospital 2nd April, 1880, with tight organic stricture of long standing. Urine can only be passed in drops with much straining, bladder greatly distended, and rupture threatening. No instrument can be passed through the stricture, which is situated in the subpubic region; and after all efforts at catheterism failed, the bladder was punctured per rectum, and a cannula and tube tied in. For some days subsequently trials were made to pass No. 1 catheter or bougie, but without success. On the 10th the conducting bougie of Mr. Teevan's urethrotome having been passed through the stricture with a little trouble, the staff was screwed on, and it was made to follow the bougie by means of moderate pressure into the bladder. The pressure was only necessary to get the thickened part, or point of junction between the bougie and staff, through the stricture, and that being passed, the shaft of the staff passed readily enough. The sheathed knife was now adjusted, and a small incision having been made at the meatus to allow it to pass, it was passed down to the stricture, and the blade being protruded this was thoroughly divided. To ascertain that this was done, the blade was retracted after resistance had ceased, and the sheath pushed further on, but no further obstruction being encountered the instrument was withdrawn, and a full rigid catheter passed. The man was discharged with a urethra of the full calibre on the 25th April, the rectal wound having healed. Mr. Teevan conditions that urine should flow through the groove in the staff before operation, but in this case it was not, as the bladder was kept empty by means of the cannula in the rectum. There was, however, no difficulty in satisfying oneself that the instrument was in the bladder, both because of the direction and of the facility with which its point moved about in the viscus, &c. There was scarcely any bleeding from the operation.

CASE 2.—Buden Saib, Mahomedan, age fifty, admitted April 8th, 1880. Old-standing stricture; has fistulous openings in perineum. No. 1 catheter passed after much difficulty. Was treated by catheterism in Shimoga two years ago, when urethra was dilated fully, but it began to contract soon after. Urethrotomy performed on April 8th; very slight bleeding; No. 11 English catheter passed readily afterwards. Fistulæ closed; No. 12 catheter passes readily. Discharged April 18th, with a large instrument to pass occasionally for himself.

CASE 3.—Ballaree, Hindu, age forty-five, admitted June 2nd, 1880, under Dr. P. H. Benson's care. Urine passing in drops; no catheter would pass; several fistulæ in perineum. Urethrotomy performed same day; no bleeding. Discharged with urethra of full calibre on June 20th, No. 12 catheter passing easily, and fistulæ closed.

CASE 4.—J. W——, European, age thirty, admitted under Dr. Benson's care on July 10th, 1880. Had been treated by gradual dilatation some time ago, but stricture recurred, and urine passes now in a minute stream. Fistulous opening in perineum. No. 4 catheter à boule passed with difficulty. Catheter withdrawn afterwards, and there was so much difficulty in reintroducing it, that Mr. Teevan's instrument was used, and the stricture cut on the 13th. The strictured portion not having been completely divided, I used the urethrotome again on Aug. 1st, and after that there was no further difficulty. No. 12 English catheter passed freely, and the man was discharged on the 22nd, with a full-sized instrument given him to pass occasionally, the fistula having closed some time previously—viz., soon after the urethrotomy.

In the last case there was a little fever after the operation, but not more than followed catheterism previously, and it was readily controlled by quinine and opium. I also noticed that in No. 4 a well-curved catheter with a stilet in it, so as to direct its point along the roof of the urethra, passed more readily than a soft straight catheter or bougie à boule, the explanation of which I assumed was, that the latter became engaged in the old fistulous orifice or annular portion of the stricture, whereas the former glided over or through the gap made by the knife, and which was ultimately filled up with the "cicatricial splice," which remained less prominent than the indurated part in the unincised portion.

Four cases are of course too few to draw any conclusions from, but if, according to the highest authorities, organic stricture is not curable, strictly speaking—i. e., the indurated structures giving rise to it are never completely removed, and the urethral canal restored to its original healthy state, and there is a liability to its recurrence, and if it is an "operation perfectly safe and easy to perform," then it would seem to me that internal urethrotomy is *the* operation for severe and obstinate cases, if not even for milder ones where, as in India, the surgeon may lack the necessary instruments occasionally, or the patients be unreasonable and disinclined to submit to lengthened treatment, and want to leave before the "gradual dilatation" process has more than half done its work. At all events I now feel myself, whether rightly or wrongly, that I can attack most cases of stricture and treat them efficiently by internal urethrotomy, without having the prospect of having to puncture the bladder before my eyes as previously whenever I failed with catheterism; that is, of course, wherever the filiform bougie of Mr. Teevan's instrument will pass, and the percentage of cases where it ought to fail is, I think, very small.

THE CHLOROFORM DEATH-BILL FOR TWELVE MONTHS.[1]

BY ERNEST H. JACOB, M.D.,

PHYSICIAN TO THE LEEDS DISPENSARY AND THE LEEDS FEVER HOSPITAL.

IN a previous communication[2] I reviewed the great change that had occurred during the past few years in the substitution of ether for chloroform in surgical practice. In 1876 a return from the anæsthetists of the London and other large hospitals revealed the fact that, save for the aged and infants, ether had taken the place of chloroform in nearly all our great surgical centres, and not only this, but that the change was felt by the officers in charge of the administration to be one greatly to the advantage of the patients as regards their subsequent condition, as well as the mere avoidance of death while under the influence of the drug.

And yet, during the past twelve months, no less than twenty-five deaths have occurred from chloroform—I ought rather to say, have been recorded, for, no doubt, many occur which it is convenient and possible to say nothing about. Of these twenty-five, seventeen only occurred in Great Britain, fifteen being in hospital, and eight in private practice. The operations were mostly of the simplest kind. Dressing wounded fingers or toes, three; necrosis, four; extraction of teeth, two; amputation of the breast and lithotrity, one each; and one for applying a splint to a child's leg. The deaths appear to have occurred in the usual way from sudden syncope. As regards the post-mortem appearances, which are noted in fourteen cases, in five all organs were perfectly healthy. In eight only the heart was more or less "fatty" or "flabby," and in one there was emphysema of the lungs.

As regards locality, two deaths took place in the Edinburgh Infirmary, where, I believe, ether is not in use; two in the London Hospital, where ether is extensively used; and three in Liverpool.

During this period five deaths from other anæsthetics have been recorded. One each from ethydene dichloride and ethyl dibromide, and three from ether. Of the latter two occurred in America, one during extraction of teeth, no particulars being given, and one during an operation for hip disease, the patient suffering from valvular disease of the heart. The remaining case, the only one in England, was that recently reported by Mr. Hartley, which could not be said to be due to the anæsthetic, as the patient was almost *in articulo* from intestinal obstruction when the operation was commenced.

It can hardly be too strongly urged that the fatality of an anæsthetic cannot be deduced from the experience of one observer. The cases must amount to tens of thousands. During the past few years, however, there has been no lack of material for statistical inquiry, and the result is to be read in the facts I have stated.

A death from an anæsthetic administered for a trivial operation cannot be regarded as anything but a serious calamity. It is not for me to say that a grave irresponsibility rests on the surgeon who employs chloroform when a safer anæsthetic is available, but I think it cannot be long before the voice of the profession (if not of the public, as in America) demands some explanation for the use of an agent whose victims are numbered by hundreds.

Leeds.

[1] Read before the Leeds and West Riding Medico-Chirurgical Society.

[2] On Ether as an Anæsthetic, THE LANCET, vol. ii. 1879, p. 539.

ABSTRACT OF

INTRODUCTORY ADDRESS,

Delivered at the Opening of the Winter Session of the School of Medicine, Surgeons' Hall, Edinburgh.

BY DR. FRANCIS W. MOINET.

GENTLEMEN,—It has devolved upon me in the name of your teachers to address to you this morning a few words of welcome and encouragement on the occasion of the commencement of the medical session. We welcome you as fellow students in a noble profession, which has for its aim the prevention and relief of human suffering, in striving to accomplish which you will find ample reward for all the labours of mind and body you may expend upon it. I take it for granted, gentlemen, you have chosen your profession thoughtfully for the love of it, because unless you feel your hearts are in the work you will neither do justice to yourselves nor to your work. It is one which should thoroughly commend itself to you in its aim and endeavours apart from all extrinsic questions as mere pecuniary reward. Now is the time to think of your work only, and how best you are to prepare yourselves for its responsible duties. In thinking over what I would address you upon this morning, it appeared to me that our time would be most profitably occupied in directing your attention briefly to what I consider is the right spirit in which you should prosecute your studies. This I feel can best be done by trying to impress upon you the importance of entertaining a high opinion of your profession and a clear idea of its responsibilities; the first will make you careful to do nothing to tarnish its reputation, and the second should stimulate you in your work, so that you will do credit to yourselves and to the profession for which you are now going to prepare yourselves, and so maintain if not raise the estimation in which it is held by the public, and increase its power of usefulness. In treating your patients you should be satisfied that you have used all the possible means which science and experience have gathered for our use. This is the responsibility which you undertake when you go out into the world to practise your profession, and which, if properly realised by you now, will be the best stimulus to you to work hard as students, by

doing which you can alone hope to bear it with comfort to yourselves and benefit to the public.

Equal attention should be given to all subjects of study; they are so intimately connected with each other, and with the practical application of our knowledge in the treatment of diseases, that ignorance in any one of them will sure to be a cause of future difficulty. The trust which a patient places in us should make us careful to be honest to avoid any semblance of quackery. When a medical man allows the thought of the fee to come before other considerations he is not to be trusted as a worthy disciple of the healing art. In this way we will render ourselves more worthy of the confidence which the public place in us—a confidence which is of mutual benefit,—it encourages us in our efforts to do our best to repay them in receiving the results of these efforts, when they apply to us in their need. To do everything in our power to spread abroad a knowledge of the true means to prevent or arrest the spread of disease is, I hold, the duty of every medical man. If our professional advice was more frequently sought for as to the daily mode of life of our patients, there would be fewer diseases to treat, and our attention could then be more profitably directed to prevent rather than cure disease, which, if not easier, would be more beneficial to the community. I would also advise you in ordering alcoholic stimulants to be careful to order their discontinuance when satisfied that they are no longer required to meet the exigencies of the case, so that they could not advance as an excuse of the vicious indulgence the doctor's order. The same may be said of the use of narcotics, such as opium, choral, or morphia; you must also remember that, as medical men, you must often necessarily be the confidant of your patient both in regard to personal and family matters. Not only the health, but often the happiness, of families may depend on your discretion. Cultivate, therefore, the habit of reticence about your patients; even in professional circles cases should only be mentioned anonymously. You must also do as much as lies in your power to advance the science of medicine. Bear in mind now that you are entering upon your life's work, and one which will demand all your energies, especially a sound mind in a sound body. Do not cram; work regularly, and you will thus economise both time and labour; your lectures will interest instead of wearying you, and the facts will be impressed on your memory, so that it will neither fail you at the examination table nor the patient's bedside. Do not during your student career devote your time to any especial subject; time enough for that when you have obtained your diploma. To be a good specialist you should be strong all round. Disease of special organs has such a close dependence upon constitutional conditions that it is impossible to separate the study of the part from the whole if you are to be successful in your treatment. These hints I offer to you as a help in going through your college career. And I give you this encouragement, that if you put your hearts in the work now it will surely become a pleasure, and when once that is the case you need not fear examinations, responsibilities, the attainment of professional reputation, and a fair amount of worldly success.

CASE OF POISONING BY PARAFFINE.

By HORACE ELLIOTT, M.R.C.S.,
LATE HOUSE-PHYSICIAN AND HOUSE-SURGEON, WESTMINSTER HOSPITAL.

A SHORT time back a child two years of age was brought to me by its mother, who stated that the child had been sent to a shop with an elder sister to purchase some paraffine. The paraffine was put into a tin can, and given to the younger child to carry. As they were going home they stopped to look at a street row; while doing so the younger child removed the cork, and drank some of the paraffine.

The child was seen about twenty minutes afterwards, and was found to be in a state of semi-collapse, being very pale; the surface of the body was cold and clammy; the pulse small and feeble; the pupils were widely dilated, but acted slightly to the light from a candle. The breath smelt strongly of paraffine. The little patient was dazed and very drowsy, and could only be kept awake with difficulty. Did not cry. Vomited slightly before I saw it, and again soon afterwards. Emetics were administered, which only acted slightly, the vomited matter smelling very strongly of paraffine. The child was not allowed to go to sleep, and about two hours afterwards it began to rally; the surface of the body becoming warmer, and the pulse more frequent; the patient cried; there was no diarrhœa. Next morning the child was quite well, the pupils being normal, and the breath smelling slightly of paraffine. I was unable to ascertain the quantity swallowed, owing to its being in a tin can.

From the above notes, it will be seen that the symptoms somewhat resembled those of poisoning by belladonna.

Bristol.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

LEFT-SIDED EPILEPTIC HEMIPLEGIA AND APHASIA; RECOVERY.

(Under the care of Dr. FERRIER.)

FOR the following notes we are indebted to Mr. P. H. Emerson, house-physician.

A. W——, aged twenty-seven, was admitted into the Todd ward on Monday, June 21st last, and transferred to Dr. Ferrier's care. All the following facts were obtained by questioning the patient, who comprehended and wrote the answers himself on a slate. His father, mother, and six brothers and sisters were all alive and healthy. He himself was married and had four children healthy, except the eldest daughter, aged six, who had had two fits, which from the description were apparently epileptic; otherwise she, too, was healthy. He had been a whitesmith for nine years, over and above serving an apprenticeship of five years. He was a right-handed man.

About 2.30 P.M. on Nov. 20th, 1869, he fell from a scaffold twenty-five feet high. In falling he struck a "padluck" with the left arm and thigh, and was so turned over that on reaching the ground he fell on his head. He was picked up insensible, and remained so until the next morning. From this fall he said he received a severe cut in the head, parallel with the middle line half an inch to the right, and extending from the level of the hair in front to the occipital protuberance behind. Six weeks after this he had his first fit (December, 1869). He had a second fall from a scaffold on Feb. 20th, 1870, followed in twenty minutes by his second fit. Altogether he had had eighteen fits. He remembered fits on July 15th and 23rd, 1875; one in December, 1879; three on March 23rd; one on June 5th, and one on June 9th, 1880. He could not remember the exact dates of others. The last two fits were the nearest together. On Nov. 30th, 1877, a piece of steel flew off from his chisel into his left eye, which led to its excision one week before Christmas, 1878. He had had lead colic three times in 1878 to 1879. Twice he had a sore-throat, but denied having had syphilis. Never had any other illness.

All the fits had been similar. Aura, he said, begins in the left hand with involuntary semi-closure and opening of hand, followed in about half an hour by pain in the left leg. About half an hour before the fit he feels a pain round abdomen, which creeps upwards as far as the larynx in front to a level with the third cervical vertebra behind, he then gets twitchings in the left side of his face, and about ten minutes before the fit these symptoms spread to the other side of the body. He is then seized with vertigo, and straightway falls unconscious. He falls on his face, foams at the mouth, bites his tongue, and struggles violently. The fit lasts from half to one hour. On recovering he feels too weak to stand, and usually rests for about one hour. After the fit he is unable to work again for a week. He stated that he has the aura before each fit, and has never had an aura without a fit following it, has never had more than one fit a day, and has gone a year without a fit. Since the first

fit two, he said, had come on after unusual exercise, as a long walk, lifting heavy weights, &c. Fits had occurred at home and at work; the first fit lasted forty-five minutes. They have been more severe lately. In no case had the fits been associated with the symptoms of plumbism. When he felt a fit coming on he called for wet bags for his head.

The last fit came on on June 9th, in the usual way. He was paralysed in the left arm and leg for two days after the fit. Was speechless after the fit, and had only spoken once since up to the time of admission, saying, "Fetch me the teapot." He was very violent during the fit, requiring two men to hold him, and was very excited afterwards. He was given a large dose of chloral and bromide of potassium, which quieted him. He had no difficulty in micturition or defecation. The arm got well before the leg.

On admission he had a slight scar on the forehead, to the right of the middle line, under the hair. None other to be detected. He complained of great pain in the right side of the head (parietal region, where he said the cut was received in the first fall), increased on slightest pressure or percussion. The left angle of the mouth was slightly lower than the right. There was very slight difference in action of the sides of the face. The facial sensibility was perfect. There was no paralysis whatever of the left arm, and sensibility was intact. Tendon-reflex was well marked in both knees. There was no appreciable difference between the two. When he held his legs in the horizontal position the left gave way first. Abduction and dorsal flexion were deficient in the left foot; sensibility was normal. The tongue movements were perfect; the lip movements were also perfect; he could whistle and swallow well. When asked whether he had headache he nodded assent, and when asked where he pointed to the right side of the forehead. On ophthalmic examination the retinal veins of the right eye were large, the disc pinkish, and the margin defined. With Gelée's tube he heard a watch twenty-two inches from the right ear and sixteen inches from the left. Understood perfectly questions put to him, but could not utter a single word; could not make any of the vowel sounds. He could write on a slate an intelligent reply to questions, and write names of objects shown him, as well as words spoken to him; but he was quite unable to pronounce the words. He complained chiefly of vertigo. Heart and lungs were normal. There was no blue line on the gums. Urine sp. gr. 1010, alkaline, no albumen; excess of phosphates.

On the 24th he had slept well, and taken food well. He still complained of slight vertigo. No pain; felt "strange." Was told to practise vocal sounds. Ordered ten grains of iodide of potassium, three times daily.

On the 25th, after dinner, he first uttered letters: O, R, and A, and several others. He could not articulate a single word, and soon gave up trying, as he said it caused him to perspire, and brought back the pain in his head. Still had slight vertigo.

On the 26th he said, "Better this morning," in a low voice. Spoke several sentences, but could not go on for reasons given above. In the evening read short extracts from a newspaper. Next day he spoke freely, but still in a low voice. Got up for a short time.

On the 28th he had slight pain in the head; but on the 29th he spoke in his natural voice. No vertigo, no headache.

On July 7th he was improving; and on the 9th, tested with dynamometer, the right hand was 110, left 100.

On 14th he was discharged, recovered.

Remarks by Dr. FERRIER.—Dr. Ferrier remarked that there could be little doubt that the symptoms in this case depended on a cortical lesion of the right hemisphere in the region of the fissure of Rolando. This was indicated (1) by the localised pain, intensified by percussion, especially over this area; (2) the occurrence of unilateral spasms, beginning always in the left hand, and followed by loss of consciousness when they became general; succeeded, after several attacks, by loss of power without loss of sensibility in the parts especially attacked by the spasms. The fact that the leg remained paralysed longer than the arm indicated a greater concentration of the distinctive effect of the lesion in the upper extremity of the ascending convolutions.

As to the etiology, the first, and considering the character of the affection, most likely hypothesis, was a syphilitic lesion of the cortex. Syphilis, however, was denied, but denial was by no means synonymous with disproof. In any case the treatment adapted for specific lesions was that most likely to be beneficial—viz., full doses of iodide of potassium, which was prescribed.

Another fact to be considered was that the patient had had one or two attacks of lead colic, and as encephalopathic affections, accompanied with intense headache and epileptiform convulsions, are not uncommon in connexion with lead poisoning, the question was whether there was any reason to suspect anything of this nature. The facts did not give much support to this hypothesis. The symptoms had never coincided with any other signs of lead poisoning, and the total absence of a blue line in the gums showed that there was no impregnation of the system with lead.

We had, however, a sufficient cause of the phenomena in the history of a severe blow on the head from a fall six weeks before the occurrence of the first epileptiform attack. The present condition of the scalp did not quite corroborate the patient's account of the severity of the injury; but even without this, the injury was no doubt sufficiently grave to have set up a superficial meningo-encephalitic irritation, for such a result may occur without marked external lesion.

An unusual feature in the case was the occurrence of absolute aphasia with left-sided hemiplegia in a right-handed man. The case was a typical instance of pure ataxic aphasia unaccompanied by amnesia or agraphia. Here only the power of utterance was abolished, and this in the most absolute manner, while words spoken and written were clearly comprehended, and the patient could think intelligently and consecutively, and express his ideas in graphic symbols.

It is not common in aphasia, with right hemiplegia, depending on affection of the left hemisphere, to have such a clear separation as in this case between word-execution, and word-memory, together with the expression of ideas in written symbols. Though there are innumerable shades in the degrees in which these faculties are respectively implicated, yet word-execution and word-memory are usually affected together, though the defects in word-memory may not be such as to appreciably impair the simpler forms of ideation. The defect, however, becomes apparent when more complex trains of thought are demanded. In this case there was a total absence of intellectual deficiency, and the patient could follow without difficulty, and give precise answers to questions involving considerable thought and discrimination. Here merely the power of word-execution was defective, and the very facts of this case, though apparently not conforming to the rule that the left hemisphere is the principal one concerned in speech, in reality confirm it. The affection of the right hemisphere caused speechlessness, probably merely by disturbance of the accustomed synenergy of the hemispheres in this volitional act; whereas the complete retention of the memory of words and their associations, internal speech, and the power of expressing ideas in the graphic equivalents of articulate symbols, all indicated the greater preponderance in respect to these faculties of the sound left hemisphere.

NORTHERN HOSPITAL, LIVERPOOL.

CASE OF DISEASE OF RECTUM (SYPHILITIC?); STRICTURE; COLOTOMY; DEATH, AFTER SIX WEEKS, FROM EXHAUSTION.

(Under the care of Dr. W. MACFIE CAMPBELL.)

FOR the notes of this case we are indebted to Dr. James Allen, late house-surgeon.

Mary C——, aged forty-five, widow, was admitted Aug. 22nd, 1878. She had suffered for more than a year from some disease of the rectum; had thin watery discharge, lumpy motions, occasional constipation, varied with looseness, with slimy and bloody stools. Was treated by suppositories and dilatation. In July, 1878, had a shiver, followed by high temperature and diarrhœa. Had great abdominal and rectal pain, which subsided under poultices and opium. From that time till her admission she had several returns of this watery, foul-smelling diarrhœa.

On admission she was very much emaciated; was in constant pain, with frequent watery stools and tenesmus. The countenance was pinched and distressed. On examining the rectum by the finger a rough tubercular surface was found stretching from the sphincter to a contraction about three inches distant. The strictured portion would barely admit the point of the index-finger. A thin sanious foul discharge followed the withdrawal of the finger. She was ordered suppositories of mercurial ointment and morphia.

The pain remained constant, and the attacks of diarrhœa

and constipation were very distressing. She was evidently sinking, therefore, upon Sept. 5th, a consultation was held with a view to deciding whether colotomy should be performed. On the morning, however, the temperature was 103·6°. She had passed a very bad night, and the operation was postponed. Next day the temperature was lower, but her general condition remained as before, the pain especially being very great, and on the day following, after consultation with Mr. Manifold and Mr. Puzey, colotomy was proceeded with under ether. Some difficulty was experienced in laying hold of the bowel owing to its emptiness and deep situation. The edges of the cut colon was secured to the skin by four silk sutures, and carbolic catgut was used to the intermediate portions. These catgut sutures were quite useless, and gave way in less than ten hours. The temperature rose the same evening to 102·8°.

On the following day the temperature was 103·2°. There was considerable alvine evacuation from the artificial anus, and only purulent discharge from the rectum, with great relief to the pain.

On Sept. 12th there was occasional fæcal discharge by the rectum. The artificial anus had greatly receded, some of the silk sutures having given way. Fresh silk sutures were applied.

On the 16th the wound was glazed, indolent looking, and there was absence of granulations. There was occasional fæcal discharge from the rectum, with decidedly less purulent discharge. The tongue was aphthous; the tonsils ulcerated; and there were ulcers on the sides and angles of the mouth, which were relieved by touching with nitrate of silver.

On the 20th the aphthous state of the mouth still continued. Glycerine and lime-water were given, with seeming benefit at first.

The further progress of the case was bad. On Oct. 2nd diarrhœa set in. On the 12th there was burrowing of pus from the wound towards the sacrum underneath the superficial muscles. Bedsores formed. There was an entire absence of any union about the wound. On Oct. 23rd she died exhausted.

Necropsy.—The most important points in the examination was some pneumonia at the apex of the right lung. The kidneys and liver were amyloid, the latter having a large white cicatrix (?) on its upper surface. The stomach and small intestines were empty, and the mucous membrane was covered by a catarrhal coat. The splenic flexure of the transverse colon was bent down abruptly in front of the descending colon, and at the level of the artificial anus it bent acutely upwards again. The descending colon was collapsed, lying along the spine. The artificial anus was in the angle of the descending loop of the transverse colon above described. Adhesions were extremely slight, and easily broken down. The mucosa of the rectum was hypertrophied. There were two strictures, both admitting the point of the forefinger—one near the anus, the other higher and out of reach from below. There was slight ulceration, but signs of cicatrisation going on. The disease seemed to be confined to the submucous tissue.

Remarks by Dr. CAMPBELL.—No history of syphilis was made out, and her character was good. The operation was undertaken for the purpose of giving rest to the inflamed rectum, and so giving time for cicatrisation to commence, when perhaps dilatation might have restored some available potency to the bowel. The complete absence of action about the wound disappointed our hopes in this direction, the patient dying from deficient vitality. The relief, however, of pain, absence of straining, and freedom from the constant discharge, gave great comfort to the patient, and made the operation so far a success. A remarkable feature in the case was the position of the transverse colon, its splenic flexure lying anterior to the descending colon at the point immediately opposite the outer edge of the quadratus lumborum, at the usual distance from the crest of the ilium.

STATISTICAL SOCIETY.—The title of the essay to which the Howard Medal will be awarded by this Society in November, 1881, is "On the Gaol Fever, from the earliest Black Assize to the last recorded Outbreak in recent times." The successful competitor will be granted the sum of £20 in addition to the medal.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Mr. A. P. Luff has obtained the open scholarship of £150, and Mr. J. Holdsworth Fisher that of £125.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Multiple Exostoses.—Sebaceous Tumour of Leg.—Cancer of Lung.—Blood in Diabetes.—Tumour of Knee-joint.—Recurrent Epithelioma in Lung.—Mucous Polypus of Umbilicus. — Ataxic Arthropathy. — Hemiatrophia Facialis.—Telostitis.—Morphœa.

THE ordinary meeting of the Pathological Society was held on Tuesday, Nov. 2nd, the President, J. Hutchinson, Esq., in the chair. Several cases and specimens of interest were exhibited. The President announced that fresh and living specimens of interest, and that were urgent, would be welcomed at the meetings devoted to the discussion on rickets. Drs. Moore, Barlow, Lees, and Gee, and Messrs. Holmes, Howard, and Parker, had signified their intention of taking part in the debate, and he hoped that Sir W. Jenner and Dr. Dickinson would also speak.

The secretary read a report by Messrs. Howse and Taylor on Mr. Gay's specimen of Recurrent Tumour of the Mamma. The growth consisted of three parts, which differed slightly in appearance, but were all composed of spindle-shaped cells, either without any stroma at all, or with a small amount of structureless intercellular material. It was therefore a spindle-celled sarcoma.

The PRESIDENT showed photographs of a case of Multiple Exostoses sent to him by Mr. Windsor of Manchester. The tumours exist around both shoulders, elbows, knees, and ankles; they are quite symmetrical in position, but are larger on the right than the left side. There is a distinct history of heredity, the father having similar outgrowths in the same situations, and exostoses being found in four generations, at least, chiefly about the knee. In the museum of the Newcastle Infirmary the President had found a skeleton with a large number of exostoses. Mr. Price of Margate had also published a similar case in THE LANCET, and ten years ago he himself had had a lad in the London Hospital under his care with exostoses growing near the large joints; he removed the largest of these, which was near the knee, and he nearly lost the patient from inflammation. He had never seen these multiple exostoses in the female sex.—Dr. PAYNE had made the autopsy on a case shown to this Society by Mr. Arnott—a woman about eighteen years of age, from whom a large exostosis near the knee-joint was removed, death resulting from inflammatory complications. Exostoses were found on every bone in the body except the skull, pelvis, and ribs. He did not know the family history.—Dr. POORE had published in THE LANCET a case of a little girl under his care at the Charing-cross Hospital, who had several exostoses. No hereditary history known.—Mr. BARKER had seen a case at University College Hospital of a girl aged seventeen, with symmetrical exostoses on the bones of the fingers, wrists, elbows, and femora. No history known.—Dr. STURGE mentioned the case of a man forty years of age with remarkably symmetrical exostoses growing from the humeri, ulnæ, radii, metacarpal bones, scapulæ, and clavicles.—Mr. PEARCE GOULD had seen a few years ago twin brothers, about five years of age, each presenting exostoses on the upper and lower ends of the humerus, which were symmetrical and alike in both except that one humerus had no exostosis on its upper end. There were also rickety "spines" on the tibiæ in each leg. The case was of interest as showing some hereditary influence.—Mr. EVE remarked that the specimens of such exostoses in St. Bartholomew's Museum showed all the outgrowths springing from the epiphysial line. He showed a lower jaw-bone on which was a large exostosis springing from the inner alveolar wall on each side at the level of the bicuspid and molar teeth, exactly symmetrical.—The PRESIDENT was glad to have elicited so many examples in females. In the family of the case he specially brought forward there had been a close intermarriage—two first cousins, three generations back—which may have had some influence in the production of the condition.

The PRESIDENT also showed a Tumour which he had

removed the day before from the leg of a woman forty-six years of age. The growth had existed twenty years, and for ten years had been ulcerated, fungated, and in its present condition. At first sight it resembled an epithelioma, but the tumour overhung the margins of the aperture in the skin. There was no warty growth, no infiltration, no disintegration, and the surface was florid, clean, with a sweet discharge. In the groin were several enlarged glands. The tumour was found to adhere to the deep fascia, part of which was removed with it. The enlarged glands were also removed. — Mr. PARKER had made a hurried examination of the growth, and had found it to consist of lobes of epithelial tissue, which he regarded as proliferated sebaceous glands, separated by strands of fibrous tissue. The growth in the glands was of a similar nature. The case differed from ordinary sebaceous tumours in its infecting the glands, and was of interest as showing that there is no hard and fast line of separation between benign and malignant tumours. — Dr. THIN had examined Mr. Parker's sections, and thought they resembled those of the growth on the cheek shown last year by Mr. McCarthy. In a case of an ulcer over the scapula, which had existed forty-three years, he had found a very similar tissue in the thick tumour-like margin—loose connective tissue, with epithelial masses in the meshes. He pointed out that at present there was no evidence of the development of these tumours from sebaceous glands; the epithelium differed from that in these glands, and there was no sebum to be found. At the suggestion of the President, the specimens were referred to the Morbid Growths Committee.

Dr. N. MOORE related a case of Primary Cancer of Lung and Embolism of the Middle Cerebral Artery. The lung was hard and shrunk, with dense masses of cancer, continuous with a large mass around the root of the lung. The cervical and mediastinal glands were also enlarged. There was no other growth elsewhere, so that it must be considered a primary tumour of the lung. In structure it was made up of a firm fibrous stroma, with tubes and spaces lined by epithelium; it was therefore a cancer of glandular origin, and he believed it originated from the crypts of the bronchial mucous membrane. Just before death the patient was seized with aphasia and right hemiplegia, and an embolon of fibrin was found in the left middle cerebral artery; this must be considered an accident in the case.—Mr. R. PARKER referred to his paper on Primary Cylindrical Cancer of the Lung read before the Medical and Chirurgical Society, in which he had fully described one case and referred to two others. He could find no reason why cancer should not develop primarily from the lung. In the fœtus the infundibula are lined by columnar cells, and it is the pressure of the air which changes the shape of the cells, which are not in nature different from those in the bronchial tubes.

Dr. N. MOORE also exhibited some Blood recently obtained from a patient who died of Diabetes in St. Bartholomew's Hospital. The man, eighteen years of age, had suffered from the disease for two or three years, and had become very emaciated; a day or two ago he was greatly distressed by some news, became suddenly worse, unconscious, and in a few hours died. There were no convulsions or direct symptoms of acetonæmia. At the autopsy Dr. Moore noticed the blood to be of a pink colour, and that the serum which separated was milky in appearance. There was no change in the oxyhæmoglobin as examined by the spectroscope, the red corpuscles were normal, the white cells rather abundant, but the serum contained a very large amount of fat granules, which rose to the top of some blood in a test tube. Dr. Gamgee had mentioned the pink colour of the blood in connexion with acetonæmia. Dr. Klein had recently lost fifty guinea-pigs quite suddenly, and he noticed both the pink colour and milky serum of the blood, but there was no reason to think the animals had diabetes. It was probable therefore that this peculiar change in the blood was met with apart from acetonæmia.—Dr. CAVAFY asked if the urine had been examined with perchloride of iron.—Dr. N. MOORE replied that it had not.—Dr. F. TAYLOR asked if any fat embolisms had been found, and whether there was any well defined condition to which the term acetonæmia could be fairly given. He had seen many deaths from diabetes, and most of them were from collapse and coma. He had seen two cases of so-called acetonæmia, but there was no convulsion.—Mr. M. BAKER asked what was the condition of the alimentary canal, and whether the condition of the blood could be explained by the sudden ingestion of a large quantity of fat.—Dr. MOORE replied that the patient had been fed on the usual diabetic diet; that the stomach was empty and the intestines filled with dry yellow, fæcal matter. He agreed with Dr. Taylor that it was difficult to define the condition of acetonæmia, but what he meant by it was a nervous condition with a strong odour of acetone before death. He should place his case in the category of those dying from collapse and coma. He had not made a special search for fat embolisms.

Mr. R. J. GODLEE showed a Tumour which he had removed from the knee-joint of a woman, aged thirty-eight. She had suffered from synovitis of the joint for four years. The tumour was felt on the outer and upper side of the patella, freely movable laterally but not vertically. He had excised it by cutting into the joint, hooking up the mass and cutting through the pedicle. The patient did well. In structure the growth was simple fibro-cellular tissue.

Mr. GODLEE also showed several microscopical specimens of Epithelioma, especially illustrating the recurrence of the squamous form in the lung, which is usually considered a rare condition. In the first case from which the specimens were taken the man had an epithelioma of the tongue and mouth, with many enlarged glands in the neck, and a large mass over the upper part of the sternum, which was inflamed and crackling. An incision into it let out turbid serum. At the autopsy several small epitheliomatous tumours were found scattered over the left side of the chest and abdomen, but not reaching across the middle line. The mass over the chest communicated with a large growth in the mediastinum by a large hole through the manubrium. In both lungs many small tumours were found, and similar ones in the liver, kidney, supra-renal capsules, and under the peritoneal surface of the diaphragm. Examination of these tumours showed them to be very much like one he had recorded in the Path. Soc. Trans., vol. xxvi., where there was also a recurrence in the lung and pleura. In the tongue and most of the smaller growths there was a very irregular collection of epithelial cells, with very little stroma and imperfect "nests"; in most cases there was an absence of the common serration of the cells. In the kidney the growth was very typical. He thought these specimens illustrated the principle that the further a tumour deviates from the normal tissues, the more malignant it was; the irregular arrangement of the connective tissue and the epithelial spaces marked out this growth as very heterologous, and it showed a more marked malignity than most epitheliomata in which recurrences in internal organs were rare. The other case was an epithelioma of the bladder, met with in a man seventy-eight years old, who suffered from dribbling of urine and difficulty in micturition; he was greatly emaciated and pale. At the post-mortem examination a large tumour was found growing from the posterior and upper part of the bladder, in the centre of which was a large ragged cavity leading through into the peritoneum; there was chronic cystitis and acute peritonitis. The only secondary deposit was a small patch in the back of the left lung, grey in colour, mottled with white specks. The primary tumour was an irregular epithelioma; in the lung the arrangement was more regular, and in places the growth was almost like true skin, with papillæ and horny epidermis.—The PRESIDENT referred to a case of cancer of the tongue, which had recurred locally several times, and had been removed on each occasion. There was a recurrent growth in the lungs just like that in Mr. Godlee's case.

Mr. PEARCE GOULD showed a microscopical section of a Mucous Polypus of the Umbilicus. The Polypus was met with in a boy five months old, in whom it was noticed when the cord fell off. It was soft, florid, pedunculated, about the size of a large pea, with a small central aperture. The pedicle was ligatured, and the growth removed, and prepared for examination by Dr. Gibbes. It was a true mucous polypus, composed of branching tubes lined by a single layer of cylindrical epithelium, with a finely fibrous and nucleated stroma. From its close resemblance in structure to the mucous polypi of the rectum, Mr. Gould suggested that it was developed from the remains of the umbilical vesicle.

Dr. PAYNE showed a living specimen—Joint Disease in Locomotor Ataxy. A man, aged thirty-four, had syphilis ten years ago. In June, 1879, he suddenly felt great weakness in his legs, in which he had had sudden sharp pains for two years previously. There was then well marked ataxia, which much improved under anti-syphilitic treatment. Five months ago he returned to the hospital complaining of his left knee, in which there was considerable synovitis, but

no evidence of any definite change in the bones; in the right knee there was a little thickening of the upper end of the tibia. Gastric disturbance had been quite absent until a week ago, when he was seized with vomiting of clear fluid. There was also a small ulcer in the sole of the foot. Dr. Payne considered this as probably a very early condition of the peculiar joint change met with in locomotor ataxia. Mr. Nettleship had examined the man's eyes, and found that there was no disease of the optic nerve, the pupils were motionless to light and nearly so to accommodation.—Dr. BUZZARD had questioned the man, and found that he owned to attacks of retching at times during the last three or four years. Out of nine other cases of ataxic arthropathy as many as six had distinct gastric crises.—Mr. BARROW asked whether this were not syphilitic disease of the knee.—Dr. PAYNE thought that time only could answer that question; but the joint had become affected while the man's general condition was being improved by anti-syphilitic treatment.

Dr. PAYNE also showed a man, forty-two years of age, who when eight years old had measles, and afterwards, under the left side of the lower jaw, there developed a swelling larger than an egg, which gradually subsided. From that time the left side of the head and face ceased to grow. In 1848 he was seen by Romberg, and was one of the cases on which he founded his views on trophic nerves. All the left side of the head and face, with the doubtful exception of the back of the head, is markedly smaller than the right; there is no impairment of sensation, nor paralysis of muscles. The affected part corresponds with the distribution of the fifth cervical nerve. Hearing is less acute on the left side, and he says his sight, smell, and taste are not so good as on the opposite side. There are bald patches above the left ear and in the left eyebrow. No affection of the limbs; tongue very much smaller on the left side, and protruded much to the left; but it is doubtful whether this is due to paralysis or to the altered shape of the parts. Facial nerve not affected. No difference in vascular supply or sweating on the two sides; and in this it differs from cases of injury to the sympathetic nerve. Dr. Payne considered the atrophy to be due to some affection of the fifth nerve.—The PRESIDENT remarked that this was the most extreme example of this hemiatrophy that he had ever met with. In his opinion such a condition followed on morphœa, and he had himself published cases to illustrate this. In Eulenberg's essay on the vaso-motor nerves it is suggested that morphœa is due to an irritation of these nerves keeping up a constant contraction of the vessels, and so leading to subsequent atrophy. His own explanation, however, of this case was that it was due to some disease of the vaso-motor nerves travelling in this case along the branches of the fifth nerve, as there is no loss of sensation, nor are the muscles supplied by the fifth nerve implicated. The President exhibited a middle-aged woman with very large and symmetrical patches of morphœa on the lower extremities and abdomen; it had existed six years. The patches in the thighs were markedly symmetrical, and not corresponding with the distribution of any nerve; but on the abdomen there was a long oval patch sloping down just in the same way as herpes zoster does, with which this disease has great analogies. He had never before seen the disease symmetrical. It was limited to the lower extremities as much as paraplegia, and at other times attacks upper limbs only. Sensation was unaffected, pain was unusually severe.—Dr. POORE regarded Dr. Payne's case as arrested development, not atrophy, the left side of the face was that of a child. The skin of the left side was quite unaltered in texture, and had no resemblance to morphœa now, and the vessels on that side were larger than on the right. He thought that the cause of the affection had quite passed away, and that it was a mistake to speak of any affection of the nerves as now existing. He suggested that the connexion between the fifth and vaso-motor nerves had been interfered with, and sensory impressions failed to be conveyed to the vaso-motor nerves governing the vessels. The large size of the vessels looked as if one of their incitements to contraction had been lost.—Dr. BUZZARD compared it to infantile paralysis of the lower limbs, and suggested that the cause was to be found in a myelitis of the medulla oblongata.—Dr. PAYNE adopted Dr. Buzzard's view, and suggested that the seat of the lesion was probably in the Gasserian ganglion. It was not simply an arrest of development, the wrinkles on the left side marked the cheek as twenty years older than the right.

Dr. LEES showed a child who had recovered from severe inflammation of the distal ends of the diaphyses of the left humerus, left femur, left radius, and upper end of right humerus; there was suppuration at two of these seats of disease. The child was syphilitic, and was treated by mercury, and had made a very excellent recovery. It had been called epiphysitis; as the seat of the disease was the end of the diaphysis, telostitis was a better name. The multiplicity and severity of the affection, the early age of the patient—six weeks at the onset of the malady—and the good recovery, made the case one of unusual interest.

Card specimen by Mr. Shattock: Dissection of Cleft Palate in Adult.

MEDICAL SOCIETY OF LONDON.

Pleurisy with Effusion.—Aneurism of Ascending Aorta.—Atrophy of the Stomach.

AT the meeting of this Society on the 1st inst., Mr. F. J. Gant, President, in the chair—

Dr. DE HAVILLAND HALL read notes of a case of Pleuritic Effusion. The patient was a discharged soldier, aged thirty-two, admitted into Westminster Hospital on July 23rd, 1880. His illness dated from April 1st, when he had the usual symptoms of an attack of acute pleurisy. He was confined to bed for eight weeks, at the end of which time, though a good deal better, he still complained of considerable dyspnœa. On July 19th he caught a fresh cold and had a relapse. On admission, the patient, who was suffering from incomplete aphonia, presented all the symptoms and physical signs of extensive left pleural effusion, dulness extending all over the front of chest, except quite at apex, and passing across to the right side of sternum. Posteriorly there was a boxy note in the supra-spinous fossa, and absolute dulness from angle of scapula downwards. At first it was not possible to detect the position of the apex beat, but on July 27th it was found impinging half an inch to inner side and below the right nipple. After a fortnight's treatment with diuretics and iodine he was tapped, and forty-two ounces of straw-coloured fluid were drawn off and all treatment by drugs suspended. The aspiration was followed by improved breathing over the affected lung. On September 3rd, as the condition of the patient remained stationary, he was again aspirated, and 110 oz. of clear, straw-coloured fluid withdrawn. While the last pint of fluid was flowing he complained of intense pain in the left chest, especially posteriorly; the pulse became so feeble and the general aspect of the patient so alarming, that the aspirator had to be withdrawn, though the fluid was flowing freely. The pain lasted some hours, but was relieved by the subcutaneous injection of morphia. On Sept. 7th there was harsh breathing all over left front. On Sept. 30th aspiration was again resorted to, and fifty-five ounces of similar fluid drawn off; extreme pain again led to the withdrawal of the aspirator, whilst the fluid was still flowing. He was discharged much relieved on Oct. 12th, in order to go to the seaside, and to be readmitted if necessary on his return. After alluding to the large amount of fluid drawn off, Dr. Hall said that the point on which he wished to get the opinion of the Society was as to the quantity of fluid it is desirable to evacuate at a single sitting. He quoted the views of Walshe, Anstie, and Fraenkal on the subject, and did not agree with the latter in laying down a hard and fast rule that not more than a definite amount should be removed at once, but was disposed to coincide with Anstie that the withdrawal of fluid must be arrested when the patient begins to complain of constricting pains in the chest or epigastrium. After both aspirations the fluid remained quite clear. On the evening of the first tapping the temperature rose to 101°, and then rapidly fell; on the second occasion it only rose to 99·8°, and on the third occasion the rise to 99·6° took place on the evening of the day following the aspiration. The incomplete aphonia which was present on admission was merely of catarrhal origin, and in no way connected with the effusion, as in a case recently recorded in THE LANCET by Dr. Poore.—Dr. THOROWGOOD was not quite satisfied with the use of the aspirator, seeing that the operation had to be repeated

so often. It was his habit to suspend the operation as soon as pain was complained of or the patient showed distress. He referred to a case under his care in which pus in the first instance was drawn off. A second aspiration a month later brought away blood mixed with serum. He thought this due to an exudation of blood corpuscles through the thin walls of new bloodvessels. The operation was persevered with and the patient recovered. He asked whether any Fellow had seen recovery follow a single operation with the aspirator.—Dr. SYMES THOMPSON mentioned a similar case to that of the author in which he had followed the suggestion of Mr. Parker, and introduced air into the chest in place of fluid. In many cases it was better to remove the fluid by a syphon rather than with an aspirator.—Dr. GILBART SMITH referred to a method introduced by his colleague, Dr. Hensley, at the City-road Chest Hospital, by which cases, especially of purulent effusion, were treated. Two trocars were used, and by an ingenious arrangement of stop-cocks the effusion could be withdrawn from an opening simultaneously with the introduction of carbolised water, plain water, or iodised water through the other; or the direction of the current could be reversed, in case of a blocking of the tubes.—Dr. SANSOM mentioned a case where a single aspiration had been sufficient.—Mr. PEARCE GOULD considered tapping was often too long delayed; it should be resorted to before the lung had become bound down by tough adhesions. He did not see the benefit of the introduction of carbolised water or air, and thought that the more slowly the fluid was abstracted the better.—Dr. WARNER referred to a case under his care six weeks ago at the London Hospital. On admission a large quantity of serous fluid was withdrawn by the aspirator. A month later thirty-eight ounces of pus were removed; rapid accumulation followed, which necessitated a third operation in ten days more. This not giving relief, Mr. Couper's advice was sought, and he inserted a second tube at the angle of the scapula, when a large quantity of pus gushed out, and continued to flow with expiratory movement for some time. This has resulted in the improved physical signs and condition of the patient. He also gave instances of a too rapid withdrawal of pleuritic effusion.—The PRESIDENT pointed out the decided advantage of counter openings for the prevention of the accumulation of fluid.—Dr. HALL, in reply, stated that in one case in which he had withdrawn seventy-seven ounces, no return of the fluid had occurred. It was not advisable to tap during the feverish stage unless dyspnœa were urgent. His plan was to insert a drainage-tube should the second tapping be followed by return of the effusion.

Dr. SYMES THOMPSON brought forward a specimen of Aneurism, involving the whole ascending aorta—from the pericardium to the aortic arch. The vessel was studded with patches of atheroma, and several calcareous spiculæ projected from its inner surface. The dilatation above the sinuses of Valsalva was as large as a Tangerine orange, and a sacculus pressed upon the apex of the left lung. The right lung was covered by tough and thickened pleura; in the upper lobe were two small cavities, with semi-fluid caseous contents, and a larger cavity full of foul grumous fluid occurred in the lower lobe, where also were numerous dilated bronchi. The left lung, although congested at the apex, was otherwise free from disease. The symptoms during life were not characteristic of aneurism. When admitted into the Brompton Hospital in June the patient complained of cough, expectoration, and dyspnœa on exertion, and there was some œdema of legs and abdomen. There was dulness and bronchial breathing under the left clavicle, and dulness with crepitation and rhonchus at the right base. The area of cardiac dulness was increased leftwards and the apex beat was half an inch outside the left nipple. There was no murmur. The cough increased, the dropsy extended to the upper extremities, and the patient died on September 12th. He had suffered from pleurisy twelve years before, but never from rheumatism or syphilis. He was forty-four years old, but had been in failing health for ten years. Dr. Symes Thompson remarked that when an aneurism compresses a bronchus and leads to secondary changes in the lung the primary disease is apt to be masked, and the tumour being deep-seated, the diagnosis between chronic pleuro-pneumonia and aneurism becomes difficult. The urgency of the dyspnœa, the pain and palpitation, awakened grave suspicion in this case, which was strengthened by the persistent and anomalous disturbance within the chest. The base of the lung had the appearance on section of multiple abscesses dispersed through it. These "abscesses" are really distended bronchial tubes full of retained secretion, the peribronchial tissue being thickened by inflammation. It seems probable that pressure upon the nerves at the root of the lung, by lowering the vitality of the organ, rendered it liable to inflammatory changes, just as complete destruction of these nerves leads to pulmonary gangrene. The pressure on the nerves may also have caused—as suggested by Dr. Risdon Bennett—paralysis of the bronchial muscles, leading to retention and accumulation of secretion. It was not clear in the present case that the bronchus was much compressed by the aneurism, but the nerve-plexus must have been seriously involved.—Dr. EWART described the post-mortem appearances found in this case; alluded to the difficulties of diagnosing the presence of aneurism, and referred to the fact that the superior cava generally suffers pressure.—Dr. GILBART SMITH referred to the important series of cases showing the effects of pressure upon the bronchi brought before the Pathological Society by the late Dr. Pearson Irvine. The present case was unusual in the right and not the left bronchus being the seat of pressure. While admitting that nerve-pressure might have some share in enfeebling the lung, as shown long ago by Sir W. Gull and Dr. Habershon, he considered that both lungs should be affected by such pressure on the pulmonary plexus. Probably the pulmonary condition was due to narrowing of the bronchus, leading to an enlarged and emphysematous condition from interference with *expiratory* rather than inspiratory efforts. In proportion as the calibre of the vessel became restricted, inflammatory and disintegrating changes would be set up by the retention of secretion. The fetid character of the secretion in Dr. Thompson's case showed that ingress of air was not wholly prevented.—Dr. SYMES THOMPSON, in reply, said that the pupils and pulse were equal, and there was no alteration of voice or laryngeal cough.

Dr. THOROWGOOD read notes of a case of Atrophy of the Stomach. The patient was a woman, aged twenty-three years, admitted into the West London Hospital on Sept. 6th on account of constant vomiting of all food. There was no sign of any thoracic or cerebral disease. The region of the stomach was very tender on pressure, but no tumour could be felt in any part of the abdomen. There was no diarrhœa and no vomiting of blood. A variety of medicines, reputed valuable for the arrest of vomiting, were vainly tried; but it was only after a hypodermic injection of morphia that any tolerance of the mildest nourishment could be obtained. Life was maintained chiefly by nutrient enemata of beef-tea. The patient died on Oct. 5th, having on the day previously vomited blood for the first time. There was no very marked emaciation. All the organs were sound with the exception of the stomach, which was remarkably thin and wasted. When cut open some grumous fluid escaped, and the lining membrane was smooth, free from rugæ, and of a yellowish hue. At the cardiac end some arborescent congested vessels were seen. A portion was given to Dr. Fenwick for examination, and he found well-marked intertubular gastritis with granular and fatty degeneration of the tubules. Dr. Fenwick was disposed to look upon a subacute gastritis as the essential cause of the wasting of the stomach.—Dr. SANSOM called attention to the administration of enemata of defibrinated ox-blood in quantities of four to six ounces twice or thrice a day, as recommended by the Therapeutical Society of New York. He had carried this out successfully in a case of idiopathic progressive anæmia when the stomach rejected everything. After a time the stomach became tolerant, and arsenic was administered. Dr. Sansom thought the method offered a good prospect of successful treatment in numerous cases in which the stomach was wholly or in a considerable degree intolerant of food.—Dr. TIMMS thought that in this case no treatment would have been successful; but less advanced cases had derived much benefit from the use of hydrochloric and other mineral acids.—Dr. DOUGLAS POWELL referred to a case under his care at the Middlesex Hospital, where the diagnosis was extremely difficult; obstinate vomiting and extreme emaciation were present, without any evidence of cancerous disease, gastric ulcer, or uterine disorder. Great improvement had followed treatment by nutritive enemata and peptonised food. He thought Dr. Sansom's suggestion of much value.—Dr. DOWSE pointed out that Dr. Thorowgood's case was of inflammatory origin, and not due to a lesion of the semi-lunar ganglia, in which case atrophy would occur apart from inflammation.—Dr. THOROWGOOD replied, and the meeting adjourned.

Reviews and Notices of Books.

The Royal London Ophthalmic Hospital Reports. Edited by JOHN TWEEDY, F.R.C.S. Part I., Vol. X. August, 1880. London: Churchill.

THE new volume of the Ophthalmic Hospital Reports opens well, and Mr. Tweedy is to be congratulated on having collected a valuable series of original articles. Mr. Lawson discusses the treatment of sympathetic ophthalmia. He considers that whilst sympathetic irritation may be arrested by removal of the injured eye, this proceeding will not stay the progress of sympathetic ophthalmia, and he therefore holds that if the injured eye retain any sight it should not be removed when sympathetic ophthalmia is established, a point in which we are disposed to agree with him, having seen several cases where the injured eye, after sympathetic ophthalmia had destroyed the opposite eye, retained sufficient vision to be very useful. We coincide with him also in deprecating any operative interference, such as iridectomy or sclerotomy, in the eye secondarily affected during the earlier stages of the inflammation, though it may be improved at a later period either by an iridectomy or by the removal of the lens. Great caution, however, should be exercised in meddling with such an eye, as if inflammation be set up sight is irrevocably lost. Mr. Lawson finds sclerotomy useful where pain is experienced. He places several cases on record.

The second paper, which is a very valuable one, is by Dr. Brailey on a Theory of Glaucoma. After alluding to the theories of Donders and Weber, both of which Dr. Brailey believes have an element of truth in them, he thinks there is both an increased inflow of blood into the eye, and obstruction to the exit of the lymph and fluids secreted. The enlargement of the vessels is probably the consequence of an affection of the vaso-motor nerves, and the connexion between neuralgia and mental anxiety, which is no doubt of very common occurrence, may thus be accounted for. The obstructed escape of the aqueous humour is due to the application and adhesion of the periphery of the iris to the cornea. He gives a classification of cases of glaucoma. Upon the whole Dr. Brailey's views seem to us to be the nearest to the truth, and the best substantiated that have hitherto been advanced.

A very different theory has been suggested to account for glaucoma by Dr. Priestley Smith, in the next following article to that of Dr. Brailey. Starting with the observation that the intra-ocular fluid escapes from the interior of the eye at the angle of the anterior chamber, and that this angle is closed in glaucomatous eyes, he endeavours to show that the closure is due to two factors, an increase in the size of the lens, and a swelling of the ciliary processes. This proposition he endeavours to maintain by a considerable number of photographic drawings.

The next paper is by Mr. George Berry on Central Amblyopia. This affection seems in the great majority of cases to be a toxic affection most commonly caused by the abuse of tobacco; the vision is noticed to become rather rapidly impaired, so that the patient finds he is unable to read, and his general health is sometimes impaired. In the defectively sensitive part there is more or less red-green blindness. The prognosis is good, since recovery usually takes place if the patient has strength of mind sufficient to enable him to give up smoking.

Mr. Couper gives a drawing and description of a new ophthalmoscope, which seems to be convenient and useful.

Dr. Litton Forbes furnishes a paper on Keratoscopy, in which he shows that the refraction of the eye may be determined by simple examination of the lights and shadows thrown by a concave or plane mirror on the cornea. The plan seems to have answered well in his hands, but would probably require much practice and very close observation.

Mr. Morton gives a note in which he describes some remarkable phenomena of pulsation in the vessels in cases of embolism of the carotid artery of the retina. Mr. Lawson suggests the use of variously-sized seeds as a means of determining the vision of children too young to be tested by means of types. Mr. Gunn gives some notes of the mode of treatment adopted at Moorfields for ordinary cases of gonorrhœal ophthalmia, iritis, cataract, &c. Finally, Dr. Brailey and Mr. Edmunds give a long and carefully drawn-up report of the condition of the optic nerve and other parts of the eye in cases of increased tension. Altogether the number is a very good one.

The Dissector's Guide. By D. J. CUNNINGHAM, M.D., C.M., F.R.S.E., Senior Demonstrator of Anatomy, University of Edinburgh. Part II. The Abdomen. Edinburgh: Maclachlan and Stewart. 1880.

AMONG the numerous manuals of dissections which are used by students in our anatomical schools, we think that Dr. Cunningham's new work must take a conspicuous place. Primarily designed for the students of the Edinburgh University, and so following the methods in vogue there, it has such intrinsic merits that when known in other schools it is sure to become a favourite. The second part is much fuller than that previously issued, and in many ways a great improvement on it, and we regret that the author should have deemed it necessary to publish the work in this fragmentary fashion. We hope that the other parts will be speedily issued, and the whole work republished in a single volume, for a "guide" subdivided into parts is rarely acceptable to the student, and never meets with the appreciation which would be accorded to it if published in a more convenient form. The fulness with which the methods of dissection are described, and the omission of all details of minute anatomy, which, as the author observes, are altogether out of place in a text-book upon Practical Anatomy to be used in the dissecting room, constitute the special features of the work. The various procedures necessary for examining the structures in the male and female abdomen are most carefully pointed out, and no one can follow Dr. Cunningham's instructions without gaining a thorough knowledge of their anatomy as far as this can be seen with the unaided eye. The descriptions of the peritoneum and pelvic fascia are remarkably lucid and comprehensive. Besides the ordinary illustrations in standard anatomical works, many new diagrams and plates are introduced, and these are very clear and of great service in explaining the text. We must congratulate the publishers on having done everything in their power towards making the book acceptable to the student and the teacher.

The Ocean as a Health-Resort. By W. S. WILSON, L.R.C.P., M.R.C.S. Small 8vo, pp. 260. London: J. and A. Churchill. 1880.

WE have read every page of this book, and have derived from it both instruction and amusement. In the present day, when voyages are so often recommended on the score of health, it is very useful to have a practical adviser—at once a sailor, a man of science, and a medical practitioner—to tell both doctor and patient what to do and what not to do, what a voyage at sea is really like, what are its shortcomings, and what are the benefits likely to arise from it. All this will be found in Mr. Wilson's book, and we should advise all who are going a voyage for the first time to furnish themselves with a copy of it.

THE Court of Quarter Sessions have voted £35,000 for enlarging the Stafford Lunatic Asylum.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 6, 1880.

WHAT has happened at Guy's Hospital is happening, or may happen, at any moment in similar institutions elsewhere. The inter-relations of governors, medical officers, and nurses are almost everywhere strained and "gritty." Why is this? We think it is because the general arrangement of affairs—the organisation as it may be called—is faulty, and in all ways calculated to go wrong and give rise to a great deal of unnecessary friction, and to become destructively heated, whenever the smallest mishap occurs, or interlocking "departments" are the least bit shifted. Let us see how such things can be, and so try to find a remedy.

The governors of a hospital *are*, and must ever be, its responsible managers. This much should be distinctly laid down at the outset of every discussion of "hospital management," whether what follows is intended to affirm principles broadly, or to state and criticise a special set of circumstances which may encompass a particular institution. When we contend for the introduction of a medical element into the system of hospital management, and assert that such an element is *necessary*, we do not mean to imply that a hospital ought to be handed over to its physicians and surgeons, but that there should always be a sufficient number of medical men on the Board of Governors, and that the policy pursued should clearly recognise that the aims and ends of the charity are exclusively medical. The governors are the managers, but they are not, therefore, autocratic, and bound by no law of procedure. There is such a thing as constitutional government, and constitutional government is the only sort of rule which can be finally safe or successful in connexion with hospitals. The administrative staff of a fairly large hospital may number from thirty to forty physicians and surgeons, who practically serve the institution gratuitously, and whose work and status bring it fame. This fact should, in itself, be sufficient to convince any sensible body of men acting as governors that they cannot treat the hospital under their control empirically, or expect its staff to submit to ordinances promulgated without due consideration. Nor is this all; the staff must be made party to every detail in the system of government if the business of the institution is to be carried on harmoniously. We are now speaking of *general* business. In regard to *professional* business—that is to say, the surroundings, accommodation, feeding, and disciplined nursing, of the sick—none but the most wrong-headed and fatuous of Boards of Governors would presume to interfere. If the medical staff of a hospital were to invade the treasurer's office and direct that the accounts should be kept on some particular system, and were to claim the right of displacing the clerks, or if they were to intrude into the kitchen and insist on engaging the cook and her assistants, or into the laundry and claim to superintend the washerwomen, they would have far better and more cogent reasons to offer in explanation of their audacity than those which the lay governors of a hospital can adduce in extenuation of the insufferable folly of seeking to control the "nursing."

There is something so preposterous in the encroachments recently made by the governing bodies of hospitals on the province of medical duty, that it must be confessed the profession has been a little remiss in not making a proper stand against the movement. It may hereafter become an interesting topic of inquiry to what we owe this outburst and exercise of energy. For the moment, however, we are too much concerned with the practical question to indulge in speculations as to the metaphysical. The duty of the instant is to assert that the medical profession cannot tolerate the assumption of distinctly medical authority in the treatment of the sick, and that rather than sanction a course like that recently pursued, the better portion of the profession would withdraw from hospital charity, leaving it to the misguided trustees of public funds and property bequeathed for the benefit of the sick poor, to work out their folly. It is within the province of the governors of a hospital to administer its funds, and to select the *personnel* of its establishment, subject to the traditions and needs of the institution, the proper judges of what these traditions and needs require being skilled counsellors: for example, in all that concerns the medical interests, care and treatment of the sick, inclusive of accommodation, diet, and nursing, the medical and surgical staff are obviously the legitimate advisers. It is within the province of the governors to see that the charity is not misdirected, squandered, or abused; and it is their duty to exercise the sort of control which a constitutional government exercises over the general affairs of a state or community; always remembering that civilians do not attempt to manœuvre armies in the field, to navigate fleets, or interpret laws and administer justice. On the same principle the lay governors of a hospital must refrain from interference in matters so obviously professional as are the care and treatment of the sick. It is not difficult to trace the limits of the authority entrusted to the governors of hospitals, or to define the functions they are expected to perform. It should not be difficult, with the combined good sense of the gentlemen who devote time and trouble to hospital management, and the sagacity and judicious and dignified firmness of a staff of educated physicians and surgeons, to secure that these limits shall be duly recognised and observed.

The medical officers of a hospital are practitioners at whose disposal public philanthropy or private benevolence has placed a house of shelter and an organisation for the cure of the sick. It is the professional business of physicians and surgeons to administer remedies, to direct the general management, and to superintend the nursing of their patients. With their own hands, or by those of the pupils their personal fame or that of the institution has brought around them, they should perform all operations, dress all wounds, and generally discharge the duties which compose the detailed treatment of disease. We are speaking plainly all round, and the truth needs to be spoken to the medical staffs of hospitals not less than to their governing bodies. It is, very much, to the neglect of practical instruction in "dressing," which has notably increased of late years, that some of the worst evils now rife in the hospitals are due. In the pursuit of *higher* branches of scientific education,

pupils have been allowed to neglect the humbler, but not less useful, functions of the "dresser." Dressing, properly defined, includes much that is now left to nurses. In the old days pupils applied *all* dressings, whether of simple lint, ointment, or plaster. They, of course, and only they, applied splints; they, and only they, exercised any "discretion" as to the treatment of the sick. There were, happily, no "sisters" in those days, and no matron ever presumed to vary an order, or herself assume the function of treating the sick. The women of the establishment acted as servants; their chief as housekeeper and disciplinarian of the female attendants under her, and she was content in this purely *domestic* department, if only her fidelity and that of the women serving under her were approved. We repeat that it is in large measure because "dressing" has come to be more restricted in its offices for the comfort of the sick "nursing" has grown out of due proportion, and become mischievous to the system of which it forms only a small and wholly subordinate part. How, we ask, can pupils be properly trained and instructed for the daily business of practitioners among the sick, if they are not permitted to learn the minor and practical details of their calling in the wards of a hospital? Does the study of medicine or surgery consist, can it be achieved, in walking round the wards of a hospital, making *scientific* investigations at the bedsides of *selected* cases, and picking up a smattering of morbid anatomy elsewhere? The older physicians and surgeons could direct the application of blisters and poultices, and even order the creature comforts of the sick chamber, because they had obtained a practical knowledge of details in the wards of the hospitals. It is much to be feared that the present generation of practitioners are not so expert; and looking to the way in which clinical study is prosecuted, the cause of the altered state of things is not far to seek. If the medical officers of hospitals do not wish to be crowded out of their proper sphere, to find their functions curtailed and their authority crippled, they must reoccupy the province from which they have practically retired, and by their own hands and the aid of their pupils—to the lasting advantage of these young men—perform their full functions, and put in exercise the authority they claim. It can only be wrested from them by their own consent. In so far as the consent to encroachment has been tacitly given, it must be wisely, courteously, but firmly and unhesitatingly, withdrawn.

The "nurses" in hospitals are, and should be content to be, servants of the medical staff, and nothing more. In so far as their position and duties differ from those of servants in private houses attending on the sound of body and mind, they are the agents by which Medicine strives to work a cure, and all such agencies must, in the nature of things, be gathered up into the hands of the physician or surgeon who treats the case. Great social misconception and a multitude of personal mistakes have arisen from the exceptional enterprise of Miss NIGHTINGALE in the Crimea. She found an army without nurses, and in a beneficent mission which will go down to history as a marvel of self-sacrifice and skill, she filled the gap and supplied the pressing need. This circumstance did not, however, warrant a host of imitators, crazy to find a means of extending the area of woman's work, in organising a movement to usurp the position of independent "ministers to the sick" in the hospitals at home. Trained nurses, like trained cooks or trained seamstresses, are useful and necessary in their place, but it is an essential part of their duty, and ought to be part of their discipline, to act under the physicians and surgeons to whose wards they are attached. "Systems of nursing" are absolutely bad and relatively mischievous. Individuality in treatment is a logical consequence of the individuality of morbid manifestations. Moreover, every physician or surgeon who takes a practical interest in his work has his own notions of nursing, and it is essential to the success of his practice that these should be carried into effect. The only difficulty that arises in acting up to this principle grows out of the introduction of "systems" and "methods" of nursing excogitated by incompetent persons, as the most expert and experienced of women—being without medical knowledge—must ever be. It is of course desirable in a large hospital to adopt one general system, but it is obvious to every unprejudiced person that the system so adopted must be one devised or approved by the medical and surgical staff. This is so plainly the fact that it seems waste of time and space to enforce it. The authority of a matron ought to be strictly limited to the control of nurses and the domestic business of the household; she has no place or function in the wards of a hospital except to see that they are duly cleansed, and the general arrangements kept in good working order. She cleans and oils the machinery, but she can have no part or interest in the way it is employed, the purposes to which it is put, or the end it is designed to answer. Obedience to orders, and the expert discharge of the personal offices required for the comfort of the sick, comprise "the whole duty" of the hospital nurse. The moment she wanders beyond the limits of this sphere of action, she is out of her depth, and her activity is to be condemned. It is not necessary to argue with nurses as to their duty, and it is needless to define it. One word covers the case completely — they must "Obey." When they are not simply obeying, they are, or ought to be, performing the function of kindly and expert attendants on the sick; but their duty as attendants is to be merged in, or subordinated to, their duty as servants of the physicians and surgeons on whose patients they are required to attend. If these general principles were clearly understood, there would be little chance of trouble arising in our hospitals, and no danger of a dead-lock.

WHATEVER may be the fate of metallo-therapy—and in the opinion of most authorities it is scarcely doubtful—there can be no question that the clinical investigations to which it has given rise have added to our knowledge of the physiology and pathology of sensation. It has indeed furnished us with more facts than we can yet interpret, but we cannot on that account doubt the truth of observations which rest on the concurrent testimony of many well-qualified observers. The facts are of a range very much wider than at first appeared at all likely to spring from the observations of M. BURQ. Almost every day fresh investigations come to hand, showing the strange and unexpected manner in which sensation may be modified in functional disorders of the nervous system. Of not least interest in this particular are some observations which have been published by M. GRASSET

of Montpellier, regarding the action of blisters in modifying perversions of sensibility.

The observations relate to a man who was suffering from left-sided hemianæsthesia alleged to be of six years' duration, and in whom right-sided anæsthesia had been previously and unexpectedly removed by a blister applied for pleurisy. The loss of sensation is supposed by M. GRASSET to have been due to an organic lesion of the brain, but its course and the circumstance of the previous attack of right-sided anæsthesia, render it difficult to accept this view of the nature of the case. The application of a blister over the deltoid was followed by the return of sensibility in the greater part of the limb. The restoration did not, however, return first in the neighbourhood of the blister, but in the hand, and it extended as far as a little above the elbow, the neighbourhood of the blister remaining insensitive. Another blister was then applied to the thigh, and was followed by a recovery of sensibility in the whole leg. The loss of sensation was thus reduced to the left half of the trunk, neck, and face.

M. A. ROBIN found some time ago that saturnine hemianæsthesia could be removed by the action of jaborandi, the diaphoresis appearing to be attended with a return of sensibility. The use of the drug was also suggested by a statement made by M. GRASSET'S patient—viz., that when he was anæsthetic on the right side he only perspired on the left. Accordingly six grammes of infusion of jaborandi were given. Perspiration was equal on the two sides. Immediately afterwards no change in sensibility could be discovered; but twenty-four hours later, after severe perspiration during the night, sensibility returned in the anæsthetic parts.

The mode of action of diaphoresis in removing anæsthesia is a subject on which there is considerable room for divergence of opinion. M. ROBIN suggested that it is by modifying the vascularity of the anæsthetic parts. M. GRASSET, however, rejects that opinion, on grounds supplied by the further history of his patient, who presented the oscillation so often noticed in cases of functional disease. Six days after the recovery of sensibility just mentioned, there was a partial loss of sensibility on the left side of the face, passing away on the following day. A little later he had another return of partial anæsthesia in the left thigh, between the hip and the knee, which passed off after free purgation. A few days later he had another attack of partial insensibility in the same region, disappearing after three days' duration, with spontaneous sweating. This anæsthesia was just in that part of the thigh to which the blister had been applied. Still later anæsthesia occurred in the left arm and hand, sharply but irregularly limited, not according to nerve-distribution. A mustard-leaf was applied to the back of the forearm, and left in position for more than an hour, causing abundant redness, but no immediate influence on the sensibility. A few hours later, however, sensation gradually returned, the recovery commencing at the upper part of the limb. Another attack of anæsthesia was quickly removed by the application of the magneto-electric apparatus.

M. GRASSET sums up, in a series of conclusions, the main lessons of this instructive case. He points out that it establishes clearly that a blister possesses an "æsthesiogenic" action at least as great as a magnet, a metal, or an induction current. It thus affords an additional proof of the modification of perception of sensation by peripheral influences. It affords also another reason for accepting the now scarcely doubtful principle, that metals and magnets in such cases have no specific action. At the same time the facts give no support to the view that any of the æsthesiogenic agents produce their effects by a simply peripheral action, whether circulatory or nervous. On the contrary, they demonstrate that the effect of a local application may cause return of sensibility to an anæsthetic limb in all parts except the region to which the blister was applied. Moreover, its action brings into view some of the central relations of sensation, and, taken with other facts, seems to show that there are certain regions the representation of which in the sensory centres or region of the brain (posterior fibres of the internal capsule, M. GRASSET thinks) is more or less distinct; these are the upper limb, the lower limb, the anterior aspect of the trunk, the posterior aspect of the trunk, and the face. Some of these may be subdivided, but the central subdivisions represent articular segments rather than the distribution of any special nerves. Each of these regions has a certain solidarity, and suffers or recovers as a whole.

The Times, in a recent leader, expressed the opinion that the occurrence of a death in an English convent without a proper certificate and registration would furnish an occasion for legislative interference. Mr. SHIRLEY F. MURPHY, the medical officer of health for St. Pancras, was allowed on the following morning to point out that during last year no less than 24,723 deaths in England and Wales were registered, and the bodies buried, without the production of any medical certificate, and without any inquiry before a coroner. It is true that registrars are instructed to report all cases attended with any suspicious circumstances to the coroner previously to registration. It cannot, however, be anything but unsatisfactory, from every point of view, that the responsibility of defining what constitutes suspicious circumstances should rest with the registrar; and it is certain that very few coroners consider the neglect of parents to provide medical attendance for their sick child to justify the holding of an inquest. Under a new *régime* it should be distinctly provided that one of the main objects of holding an inquest is to ascertain the cause of death, when no other satisfactory evidence is forthcoming. How far this is the case at present we learn from an official return just issued by the Home Office. It appears that 27,056 inquests were held in England and Wales during last year, at an average cost of £3 each. From the verdicts, it would seem that in no less than 9776, or more than a third of the total number, the cause of death was not determined; indeed, in so many as 3046 cases the unsatisfactory verdict of "Found dead" was returned. The Births and Deaths Registration Act enacts that the "cause of death" is one of the several particulars concerning a death which is the subject of an inquest to be certified by the coroner, for entry in the Death Register. This enactment is ignored, however, by a large number of coroners, hence the perpetuation of the old-fashioned and comparatively meaningless verdicts, "Visitation of God," "Found dead," "Accidentally

killed," &c. In a large proportion of cases of sudden death from natural causes, the medical attendants of the deceased would be prepared to give satisfactory evidence of the true cause of death, but their evidence is not called for. At the present time, when the laws affecting coroners are under consideration for the purpose of revision, it is well not to lose sight of the necessity for instituting some system of certification in cases where no medical certificate is forthcoming, and where no inquest is held. A memorial has recently been presented to the Home Secretary, under the advice of the medical officers of health in Wandsworth Union, praying for legislation, with a view to check the present dangerous facility for the registration of uncertified causes of death. It is proposed in this memorial that the duty of inquiry and certification of causes of death, not otherwise certified, should be imposed upon medical officers of health. The subject is too important to be lost sight of, but it is so intimately connected with the present defects of the law relating to coroners, and the suggested remedy is so bound up with the present unsatisfactory *status* of medical officers of health, that we can scarcely hope for a prompt alteration of the present condition of things with regard to registration of deaths.

Annotations.

"Ne quid nimis."

THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THE above newly-formed society held a very successful opening meeting on the 28th ult., under the presidency of Mr. Bowman. The laws of the society were read and approved, and the number of members of council was increased to admit some well-known provincial ophthalmologists into that body. After these preliminaries the society at once entered upon its special work. Dr. Gowers exhibited and described two very interesting cases of optic neuritis; Mr. Nettleship exhibited a case of tumour of the iris. A feature in the proceedings, which might with advantage be followed in some other societies, was the discussion of cases exhibited before the reading of papers was commenced. The paper of the evening was by Mr. J. Hutchinson, detailing a case of retinal hæmorrhages in a young man, and discussing their association with the gouty diathesis, with constipation and increased arterial tension. Several members took part in the discussion, of which we hope next week to give a brief report. Already a very considerable list of original members has been obtained, including many physicians and surgeons, in addition to pure ophthalmologists, and the proceedings of the first meeting showed that the society did not intend to limit its operations to ophthalmic surgery only, but that the wider bearings of disorders of the eye in connexion with disease are included in its work. At the commencement of the proceedings a resolution was passed authorising the council to put themselves in communication with the Board of Trade in reference to the question of colour-blindness in persons engaged in signalling, a subject which, the President pointed out, had already engaged the attention of foreign Governments, and the importance of which can hardly be overrated.

LIBEL CASE IN INDIA.

WE have received from India a full report of the proceedings in the case of Surgeon G. C. Hall, Indian Medical Service, *versus* Surgeon-Major K. McLeod, editor, and Mr. F. F. Wyman, publisher of the *Indian Medical Gazette*, for defamation in imputing to him unprofessional conduct. It appears that Dr. Hall, while holding the appointment of superintendent of the central prison at Allahabad, established an Eye Hospital in that city, and carried it on at his own expense. This institution met with so much success that after some time a larger house and more complete equipment became necessary for its efficient working. In view of the increased expense Dr. Hall made an application to the Government, through the head of his department, to take it over and to maintain it. He was informed that before doing so the Government would require evidence to show that the hospital was likely to prove self-supporting, and he was requested with this object to forward to them his subscription list. As he had hitherto supported the hospital chiefly at his own expense, no such document existed. In order to obtain the information required, he inserted in the *Indian Herald* an advertisement stating that subscriptions were urgently needed for the hospital, the number of cases which had been treated in it, with the number of operations and their results, the average cost of the institution, and the means at its disposal. Upon this advertisement the *Indian Medical Gazette*, in an editorial article, commented as follows: "Our attention has been drawn to the fact that a medical officer serving in a large town in the north-western provinces is in the habit of soliciting by advertisement subscriptions to an Eye Hospital which he has established. The medical transactions of the institution are set forth in the advertisement: 'There have been 180 major operations, including 95 cataract operations and 31 iridectomies; with one exception these have all been successful.' The advertiser is certainly entitled to be congratulated on this marvellous success, but it is hardly consistent with the feelings and usages of the medical profession. We are not surprised to find that the line he has elected to adopt has not met with the approval of his brother officers serving in the same province, and we have no hesitation in pronouncing his proceedings in this matter unprofessional." For this article Dr. Hall brought his action for defamation against the editor and the publisher. The magistrate, in his judgment, says very justly that "the sting of the article complained of, the essence of the libel charged, is of course contained in the ironically conveyed insinuation that the successes advertised were not really obtained, and in the stigma of unprofessional conduct fixed upon the advertiser. There can be no doubt in the mind of any reader of ordinary intelligence that the words 'the advertiser is certainly to be congratulated on this marvellous success' do convey, and were meant to convey, the ironical insinuation I have referred to." In addition to his own evidence, Dr. Hall called only one witness; but as the Court desired to have the evidence of a medical officer of standing on the professional points involved, the senior medical officer in Allahabad attended at the request of the magistrate for that purpose. Six witnesses were examined, by commission, for the defence, which was based on the grounds that the advertisement was rightly styled unprofessional, and was of a nature which has always been condemned by the leading professional journals in England and by the profession at large; that the statistics were rightly styled "marvellous," as being quite unprecedented; that the advertisement led readers to presume that Dr. Hall was the performer of these operations; and that the accused in publishing the article acted in good faith. In a long and carefully drawn up judgment the magistrate, Mr. Markham, reviewed the whole of the evidence, and came to the conclusion that there was nothing unprofessional in the advertisement, and that no one but Dr. Hall could have signed it. "If," he says, "an unpretending, unegotistical advertisement like that in question, soliciting subscriptions for a charity and showing that that charity is deserving, is unprofessional, and

is so chiefly because it is signed by the medical man most intimately connected with the charity, then the sooner the canons of what is called medical etiquette are reformed in this respect the better." And again he observes:—"It does not do or state any of the things which its detractors say are unprofessional. Its object is one which all the witnesses say it is strictly proper for a medical man to do—viz., the collection of subscriptions for a charity, and giving the details of operations performed in a hospital is stated by all to be usual. It is true, as a matter of fact, that the operations were his own, but Dr. Hall hides these facts from the general public to whom his advertisement was addressed." Mr. Markham held that the statement that the results were "marvellous" was not true, and that the insinuation that they were falsely stated was unfounded; "the criticism conveys not an opinion properly so-called, but a slur on the private character of Dr. Hall, in that it insinuates he has been capable of publishing false statistics of his skill in order to 'herald forth' his success." On the question of good faith he also decided against the defendants, because good faith is defined by the Indian penal code to be "the doing or believing a thing *with due care and attention*," and he was of opinion that the evidence failed to show that due care and attention had been exercised by the defendants in ascertaining the facts of the case before publishing the libel. The Court thereupon found against the defendants on all the pleas, and sentenced Surgeon-Major McLeod to a fine of 300 rupees, or, in default, simple imprisonment for one month, and Mr. Wyman to a fine of 150 rupees or fourteen days' imprisonment, the expenses of the prosecutor to be paid out of the fines.

We have gone very carefully through the whole of the evidence submitted to the Court, and the judgment of the magistrate, with the result that we concur with him generally in the conclusions at which he arrived. We regret much that an officer of Dr. McLeod's standing should, with the best possible intentions, but from want of due consideration, have placed himself in so unpleasant a position, but, on the other hand, it is a satisfaction to find Dr. Hall completely and honourably acquitted of any unprofessional conduct. But although Dr. Hall has cleared himself from the serious imputation cast upon him, we are sorry that we cannot congratulate him on the course he thought it advisable to adopt for that purpose. Before commencing legal proceedings against a member of his own profession and an officer of his own service, it would, in our opinion, have been only courteous and proper to have given Dr. McLeod an opportunity of withdrawing the imputation, which we are disposed to think he would have done had those explanations been given which were elicited in the course of the trial. It was not in good taste to commence proceedings for libel without first endeavouring to settle the matter in a friendly manner. We also think it would have been much better, and equally effectual for the purpose intended, had Dr. Hall contented himself with stating the number of operations without giving the results, more especially as it appears from his evidence that they were all specially selected cases—a circumstance which must have materially affected the question of success.

UNQUALIFIED ASSISTANTS AND MEDICAL CERTIFICATES.

WE are repeatedly asked whether it is lawful for a medical practitioner to sign a certificate of the cause of death of a patient who has been solely attended by his unqualified assistant. The unsatisfactory state of registration law which permits, and indeed enjoins, the registration of every death whether or no any satisfactory evidence of its cause is forthcoming, is just now beginning to attract the attention which it has long demanded. Our correspondents' inquiry has a somewhat important bearing upon this subject of uncertified causes of death, a considerable proportion of which is due to the practice of unqualified assistants. The form of medical certificate provided by the Registrar-General, if fully filled in, affirms that the registered practitioner signing the certificate had "attended" the deceased person, and also the date when the patient was last seen. Section 40 of the Births and Deaths Registration Act of 1874 enacts that any person who wilfully makes any false certificate or declaration under or for the purpose of this Act, and gives or sends such false certificate as true to any person, shall for each offence be liable on summary conviction to a penalty not exceeding £10, and on conviction on indictment to fine or to imprisonment with or without hard labour for a term not exceeding seven years. There can be no question that any practitioner who signs and issues a certificate declaring that he has "attended" a deceased person whom he had not seen during his or her illness makes such a false certificate as was contemplated by the above-mentioned section of the Registration Act. Under the present state of the law no one can give a legal medical certificate of the cause of a death unless the deceased person have been attended during his or her last illness by a registered medical practitioner. It is difficult to say whether the profession or the public suffers most from the abuse of the system of employing unqualified assistants.

THE RATIONALE OF COLD-CATCHING.

THE maintenance of a healthy body may be stated as an equation of force, and, by the doctrine of the correlation of forces, an equation of heat. We are compelled in dealing with the indefinable property of life—i. e., vitality—to seize upon the idea and grapple with its formula, as our, want of, knowledge of the truth will best enable us. It is not the whole truth to say that the equation of internal and external heat is the problem of health preservation, because heat is only one form of motion, and, as regards the phenomena of life, electricity, magnetism, and psychic and nerve-forces, whatever these may be, are factors in the production of the result; but heat is at once the readiest expression, and, so far as we know, plays the most prominent part in the maintenance, of the health. Therefore it is not only permissible, but scientifically accurate, to lay great stress on this factor—namely, temperature—in dealing with the problem of avoiding cold and preserving a normal state of vitality. There are, accordingly, three propositions which it seems well to press on public attention at a season when great and sudden changes of external temperature beset us, and the perils consequent on such changes are especially rife. The chief, and in one sense the only, source of animal heat, is within us. We wear clothes to prevent the radiation of heat generated within our bodies to the objects around. In a state of nature, even in the tropics, it suffices to dispense with clothing in order to be normally temperate; but the use of sunshades and puggeries may serve as an illustration of the use of clothing or apparatus to prevent the access of heat from without. Practically the human organism must be maintained at a temperature equal to 96·5° of Fahrenheit in all climates. The differences of the normal temperature are very small. What is then required is as follows:—The body must generate enough heat, by the conversion of food into heat, or work into heat, to raise the body to the normal standard, *plus* whatever may be lost to surrounding objects. The use of non-conducting clothes may minimise the loss, perhaps prevent it altogether, but this will not secure a healthy temperature unless the organism generates heat sufficient for the supply which the conditions of life demand. If therefore the demand is exceptionally great at any time, the strain on the internal sources of heat will be increased in a corresponding degree, and upon the satisfaction of the demand so created will depend the pre-

servation of health. As we have said, this is not the whole truth, but it will suffice for the purpose of a practical suggestion to limit what we have to say to this aspect of the question. By habituating the organism to work at a low pressure, so to say, it is unfitted to cope with special circumstances creating an extraordinary demand. If a man has the rooms and passages of his house heated to what is called a "comfortable temperature," he practically habituates *himself* to produce little heat; and it may happen that even the stimulus of exercise will not evolve so much extra heat, or the recourse to additional clothing will not so minimise the loss of heat, as to render the low supply generated within his organism adequate to the need of emergencies. If this failure happens he is "delicate" or "susceptible to cold," and his health is always in jeopardy. Sometimes, by the use of a diffusible stimulant, such as alcohol in some form, or tea or coffee, he may so excite the heat-producing faculties of the organism, before going out into the cold, as to ward off a "chill"; but the effect of these artifices is very transitory, and they generally bring depression in their train. It is better policy to establish such a habit of heat-production as shall render the supply equal to all probable demands. This can be most readily accomplished by the use of the cold or tepid bath—as a stimulant to reaction, not a heat-abstractor and depressant,—and by the avoidance of such wraps as, while they minimise the loss of heat, obviate the necessity for a large habitual production. A volume might be written on this subject of temperature regulation, and a volume *must* be written if the whole truth about the nervous and other forms of force concerned in the maintenance of vitality is to be told; but what has been said will suffice for the hint we are, at the moment, concerned in offering.

THE REQUIREMENT OF GREEK IN THE PREVIOUS EXAMINATION AT CAMBRIDGE.

A DISCUSSION took place in the Arts Schools at Cambridge on Tuesday, Oct. 26th, on the report of an influential Syndicate, which had been appointed to consider a memorial sent by schoolmasters and teachers, including the headmasters of Eton, Winchester, Westminster, St. Paul's, Harrow, and Rugby, Matthew Arnold, C. Darwin, Sir J. Hooker, Professor Huxley, Professor Tyndall, Dr. Vaughan, and the Bishops of Exeter and Winchester. The memorial stated that "the present regulations, according to which a knowledge of Greek is required from all candidates for the Previous Examination at Cambridge, have the effect of excluding a large and increasing number of able and deserving students from the benefits of university education," and it respectfully prayed that the University would be pleased to take into consideration some means whereby candidates for an honour degree may be relieved from the obligation of passing an examination in Greek.

After much deliberation and inquiry, the Syndicate reported—(1) in favour of the relaxation of the requirement of Greek in some cases; (2) that the relaxation should be restricted to candidates for honours; (3) that a knowledge of French and German should be accepted as a substitute for Greek.

THE ABSORPTION OF SNAKE-POISON.

A COMMUNICATION to the Académie des Sciences by MM. Couty and Lacerda illustrates a source of fallacy in the estimation of the virulence of certain snake poisons. Bothrops jararaca is a small snake reputed to be but slightly venomous. They have found, however, that its poison introduced into the blood is very active, while they have ascertained that when introduced into the cellular tissue, it produced but slight toxic symptoms, apparently in consequence of the slowness and difficulty with which it is absorbed. Local symptoms of irritation are much more marked than general symptoms. Inflammation and local abscesses were caused, but no symptoms similar to those which followed its introduction into the blood, although the subcutaneous dose was five or six times as great as that which had determined toxic symptoms when introduced into a vein. The local inflammation produced was always of a low order—phlegmonous abscesses beneath the skin, or in the muscles; hæmorrhagic pneumonia or pleurisy, when the injection was into the lung; meningo-encephalitis when into the brain, and some of these lesions by their violence caused death, but never the specific effect which was found to follow injections into the subcutaneous tissue. Another interesting fact which was ascertained is the tolerance exhibited by the stomach. The only visible lesions produced there were a few spots of extravasation in the small intestine, scarcely ever in the stomach, and this even although the dose introduced into the stomach is six or ten times greater than that which, introduced into the blood, would be immediately fatal, and introduced under the skin would cause an enormous abscess. But in some of these cases in which the alimentary canal suffered so little, certain distant lesions were found—endocarditis, scattered pneumonia, and some fatty degeneration of the liver.

CROSSED PARALYSIS OF THE SYMPATHETIC.

A REMARKABLE effect of removal of the superior cervical ganglion has been observed by MM. Dastre and Morat. Their experiments, made upon dogs, related not only to the effects of removal of the ganglion, but also to those following the division of its chief branches, especially of the intercarotidean filament. The animals experimented on were examined at different periods after the operation—four days, eight days, and three weeks. Recovery quickly followed the removal of the superior cervical ganglion: the same evening the animal took food in the ordinary manner, and seemed well. Eight days later, the animal having been slightly curarised, the vagus and sympathetic nerves were divided on the side on which the ganglion had been extirpated. If then the central end of the nerve was stimulated, of course no dilatation of the buccal vessels on the same side followed, but there ensued the unexpected effect of dilatation of the buccal vessels on the opposite side; and this effect was arrested by section of the right vago-sympathetic trunk. This demonstrates the path by which this interesting crossed action was produced.

A VETERAN PROFESSOR.

M. CHEVREUL has finished, for the fiftieth time, his lectures at the Museum of Natural History on the Application of Chemistry to Organised Bodies. Each course has consisted of forty lectures, making a total of two thousand in all. M. Chevreul is in his ninety-fifth year, and he is still an indefatigable worker in the laboratory. His father reached the extreme age of a hundred and ten. The American Association for the Advancement of Science, assembled for its twenty-ninth session at Boston, has sent the eminent *savant* a congratulatory telegram expressing the hope that he will be spared to continue his labours until the end of the century.

THE MEDICAL OFFICERSHIP OF ST. MARYLEBONE.

ON Thursday afternoon the vestry by ballot (Mr. Churchwarden Howard in the chair) appointed A. Wynter Blyth, M.R.C.S., F.C.S., to this position; the numbers for the successful candidate being 69 out of a total of 109 present, 4 of whom lost their votes through being a minute or two late.

THE classes in the Medical Faculty of the Aberdeen University were opened in Marischal College on the 27th ult.,

when introductory lectures were delivered by Professor Pirrie (Surgery), Professor Struthers (Anatomy), Professor Stirling (Physiology), Professor Ewart (Natural History), Professor Shand (Practice of Medicine), Professor Davidson (Materia Medica), and Professor Stephenson (Midwifery). The address of Professor Struthers dealt more particularly with the system of medical education and graduation in Scotland compared with those of England. Professor Stirling spoke on Animal Magnetism; while the remarks of Professor Stephenson were directed to the Relations existing between Hospital and University.

DR. ROBERT GREENHALGH, one of the consulting physicians of the Samaritan Free Hospital, has just presented to that institution a portion of his medical library, consisting of 600 volumes, together with his obstetric instruments. The books are given with the view of forming the nucleus of a permanent library for the use of the staff. We think that Dr. Greenhalgh has done a good work by thus bestowing his books in order that his colleagues may have the opportunity of using such a valuable collection. We need scarcely add that the committee of the Samaritan Hospital have most cheerfully accepted Dr. Greenhalgh's gift, and are making suitable arrangements for the proper care of the books and instruments.

THE death is announced on the 25th ult. of Anthony Beale, Esq., late Surgeon-Major Bengal Medical Establishment. Mr. Beale was educated in Edinburgh, and entered the East India Company's service soon after obtaining the diploma of the College of Surgeons. He served through the Punjab campaign in charge of a battery of Bengal Artillery, and was for many years surgeon on the personal staff of the Governor-General, Lord Canning, whom he accompanied to England after the Mutiny. Mr. Beale retired from the service in 1859, and for many years has resided in Royal-crescent, Cheltenham, where his death took place very suddenly and unexpectedly last week. Mr. Beale was unmarried.

A NEW district hospital, designed for twelve beds, has been opened at Shepton Mallet. The new building stands upon a plot of ground about an acre in extent, and about 100 yards from the old hospital. The design is Gothic, and the material used is stone from a quarry in the neighbourhood, with Bath stone dressings. The construction and arrangements of the edifice are spoken of favourably.

THE death of one of the sisters of charity from diphtheria, contracted during attendance upon the sick of the disease, is announced from Poltava. She was a member of the third detachment of sisters sent by the Red Cross Society to the relief of that district during the still persisting epidemic.

THE entries of students at Owens College, Manchester, this session are as follows:—First year's students, 54; second year's, 57; third and fourth, 75; for partial courses, 25; total, 211.

A CLASS is to be formed at the Military Female Hospital, Chatham, under the superintendence of the Principal Medical Officer of the district, for the purpose of instructing the soldiers' wives in midwifery and general nursing.

THE following gentlemen are candidates for the vacant office of Assistant Physician to the Middlesex Hospital: Dr. Bias, Dr. Burnet, Dr. G. C. Henderson, Dr. C. Hood, and Dr. Wm. Murrell.

A COURSE of stenography has been organised at the Academy of Medicine, St. Petersburg, and one hundred students have intimated their intention of following it.

DR. B. W. RICHARDSON, F.R.S., has been elected to fill the vacancy on the London School Board, caused by the death of Mr. Watson, one of the representatives of Marylebone.

DR. BELL FLETCHER has been appointed President of Queen's College, Birmingham.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

THREE reports have been issued from the Medical Department of the Local Government Board, all from the pen of Dr. H. F. Parsons, and referring respectively to the Llanelly Urban Sanitary District, the Pontardawe Rural Sanitary District, and to the Stourbridge Registration District. Each of these reports will require brief consideration.

Llanelly.—This report is of peculiar interest, as illustrating the progress of sanitary improvements among a large industrial population. Llanelly has been the subject of four official sanitary inquiries. It was inspected on behalf of the General Board of Health in 1850, by Mr. G. T. Clark; again in 1866, under instructions from the Privy Council Office, by Dr. Hunter; still again, and also from the Privy Council Office, by Mr. Netten Radcliffe in 1870; and now, for the fourth time, by direction of the Local Government Board, by Dr. H. F. Parsons. These several reports enable us to follow the sanitary history of the place somewhat closely from the period of the unreformed state of the district to the present time. Dr. Parsons' inquiry appears to have been called for by an undue prevalence of scarlet fever and "fever" in the town; but although this close attention of the Government would seem to imply that Llanelly was particularly in need of exterior incentives to induce it to carry out properly its sanitary functions, on the whole it would seem that, having regard to the circumstances of the place, the local authority has been far from neglectful, and, under considerable difficulties, has effected great changes. Systematic and costly works of sewerage and water-supply have been carried out, leaving few parts of the district now to be provided for. At the time of Mr. Radcliffe's inspection in 1870, 8400 yards of sewers had been constructed; now 32,000 yards exist. Again, in 1870, the water-supply consisted of 8,000,000 gallons held in reserve, and a temporary supply derived from the river Lliedi, the waters of which were intercepted and distributed by gravitation to the town. Now the valley of the Lliedi has been dammed, and a reservoir formed holding 160,000,000 gallons, admitting of a much larger and more detailed distribution of water in the town. Further, at the time of Mr. Radcliffe's visit it was estimated that five-sixths of the population used common privies, or adopted other and less formal means for the deposit of their excrement. Now, 1530 houses are provided with watercloscts, 836 with pail-closets, 616 with the common privy, and only 169 are without any appliances of this sort. Corresponding advances appear to have been made in the general cleansing and cleanliness of the town. Dr. Parsons shows that these great changes have probably been followed by equally great changes in the prevalence of "fever" in the town, for unfortunately, from peculiarities in the district, the data do not exist which would enable an accurate opinion to be formed on this score, and on the mortality of the place generally. But Llanelly has always had an ill reputation for fever; and Dr. Parsons' inquiry proves that this still in a measure continues, and would seem to throw doubt upon the efficacy of the sanitary measures which have been adopted by the local authority. This, however, is far from being the case. A careful inquiry into the conditions under which the more recent cases of fever have occurred leaves little doubt that the fever of the district is enteric fever, and that it is dependent upon favouring conditions in particular houses. In other words, these conditions, although they have been largely ameliorated

throughout the town generally, have been far from eradicated. The first steps which had to be taken were to make provision for the effectual sewerage, water-supply, and filth-removal of the town. Until this was done the detailed abatement and prevention of the recurrence of nuisances in individual houses could not be carried out. Now that the fundamental sanitary requirements of the town have been virtually completed, it has become possible to deal effectually with individual houses in detail, and this is the kind of work which is now more particularly required from the local authority, and which is needed to give full effect to the measures previously carried out. It is no reflection upon the local authority to say that this detailed work is in arrear, not only as it concerns the local conditions provocative of enteric fever, but as regards the prevalence of infectious diseases generally. Reports, such as this report of Dr. Parsons on Llanelly, are invaluable to local authorities, enabling them clearly to see the position in which they stand with regard to their various efforts at sanitary improvement, and showing, from the health aspect, in what respects these efforts need to be amended or supplemented.

TYPHOID FEVER AT BURLEY-IN-WHARFEDALE.

We have been favoured with the following particulars of the recent outbreak of typhoid fever at Burley-in-Wharfedale, a village where the Rt. Hon. W. H. Forster, the Chief Secretary for Ireland, resides. The first case came under observation on the 19th September and was followed by eighteen other cases from that date to the 13th October. Of these eighteen cases three ended fatally. All the cases occurred among the wage-earning classes. The cause to which the outbreak is assigned was the foul condition of the ashpits and privies in connexion with the cottages. In Burley there is, it seems, no systematic cleansing out of these places, although the attention of the Local Board has been repeatedly called to the subject. The duty of attending to the emptying of the ashpits and privies has been thrown upon the occupier, quite irrespective of his ability to secure such emptying so as to avoid or prevent nuisance. As a consequence there has been terrible neglect, in the face of which both the occupier and the Sanitary Authority appear to have been helpless. In a recent inspection it was found that some of the ashpits and privies had not been cleansed for eighteen months, and the usual practice would appear to be to cleanse them once every year in October, when it suits the convenience of neighbouring farmers to cart away the accumulated filth. The occupiers, in fact, have to depend upon the farmers for the cleansing of the ashpits and privies, and the farmers are not prepared to carry out the cleansing except when they want the accumulated filth for deposit on their fields as manure. The cleansing, in other words, has to be carried out, as a rule, not with reference to the health of the community, but with reference to the fertilisation of the adjacent lands. The ash- and privy-pits are improperly constructed, and admit of the collection in them of much foul liquid. It is complained that, although covered in, they are not ventilated, but it is obvious that either rain finds its way into them, or that "slops" are deliberately thrown in, and that in either case the essential requisite of a common privy, if it is to be used with the least degree of nuisance—namely, dryness of the contents—is set aside. Until this requisite is secured, ventilation of the ash- and privy-pit becomes of secondary importance. The cottages to which these barbarously-constructed out-offices are attached are described as "very handsome," and when it is added that the offices were designed by the architects who also designed the cottages, their hopelessness from a sanitary point of view follows almost as a matter of course. The pits have drains, and their offensiveness must necessarily be extreme. The water-supply of Burley, derived from moorland springs, is exonerated from all suspicion of having any part in the determination of the fever.

THE ARREST OF INFECTION.

A case of no little importance with reference to the arrest of infection was heard before the stipendiary magistrate at Liverpool, Mr. Raffles, on the 20th inst. A woman, the keeper of a provision shop, was summoned by the Health Authority for exposing herself to the public in clothing which had been in a position liable to become infected. The summons was laid under the 126th section of the Public Health Act, 1875. It was stated in evidence that on the 15th inst. the defendant was serving customers in her shop, having at the same time four children suffering from scarlet fever, and whom she was nursing personally. She was warned not to attend the shop, and it was intimated to her that it should be shut up. Further evidence was produced with a view of showing that the clothing which the woman wore would, under the circumstances, be infectious. Mr. Raffles observed that he did not see that the case came under the section of the Public Health Act referred to, and the solicitor who conducted the prosecution remarked that that was his own view, and that there was no law to meet these cases. The authorities were very anxious to stop the disease in the way observed in this case, and he hoped they would be in a position next time Parliament met to obtain a provision which would prevent one of the most dangerous practices that could prevail in a town like Liverpool. We wish that these remarks had been continued, so as to give some indication how the difficulty was to be met of compensating or of preventing actual pauperism of petty shopkeepers, who would have to cease attending upon their business under circumstances similar to those occurring in this case. Does the Liverpool authority propose to make the alternative of removal of the cases to a hospital indiscriminate in its application?

The public health committee of the Aberdeen Local Authority recently determined to recommend that a clause should be inserted in the Bill which is to be applied for by the Town Council in the ensuing session of Parliament to the following effect:—"In order to secure more prompt action in dealing with infectious diseases, every medical practitioner practising within the burgh shall, within twenty-four hours of the same coming to his knowledge, report to the local authority every case of cholera, small-pox, measles, scarlet fever, scarlatina, diphtheria, typhus fever, enteric fever, and whooping-cough occurring in his practice, and stating the house or place where the patient is being treated, under a penalty not exceeding forty shillings; and if it be found on inquiry by the local authority that the diagnosis of such practitioner was correct, such practitioner shall be paid by the local authority a sum not exceeding two shillings and sixpence for every such case so reported and verified; and in order to facilitate the making of such reports, every such practitioner shall, from time to time, be furnished, on application to the local authority, with printed forms stamped for postal transmission; provided always that the local authority may, from time to time, alter and vary the list of diseases of which such reports shall be made." The council agreed to this recommendation, and granted authority to carry out the object in view.

Mr. N. C. Collier, the medical officer of health for Fulham, in his report for the third quarter of the year, speaks favourably of the health of his district. Writing of the individual who was sent to prison, at the instance of the Sanitary Authority, for refusing to quit a house unfit to live in, in accordance with a magistrate's order and after thirty-six applications to the police-court, and who unfortunately died in prison, Mr. Collier observes: "Surely the comfortable ward of a prison infirmary was preferable to a house containing nothing but an atmosphere reeking with stench. It was not known as a fact that he was ill. Had he complained to the warrant officer he would have been at once taken to a hospital or workhouse." With reference to reported typhoid fever at the Wormwood Scrubs Prison, Mr. Collier states that he has been unable to discover any sanitary defect on the premises, but confirms the report of the prison being exposed to nuisance from piggeries.

At a public meeting recently held in the Mission Hall, Great Arthur-street, St. Luke's, resolutions were passed asking the Home Secretary to introduce a Bill amending the Artisans and Labourers' Dwellings Improvement and Streets Improvements Acts, so as to enable the Metropolitan Board of Works and the Commissioners of Sewers to build proper dwellings to accommodate the labouring classes displaced by the carrying out of the Acts; regretting the action of the Metropolitan Board in refusing to seek Parliamentary powers to effect this object; and calling upon the Board to request the Peabody Trustees to fulfil at once their engagements relating to the Whitecross-street improvement scheme. A further resolution was passed approving of the action of the Local Rights Association in endeavouring to obtain proper dwellings for the people; and expressing a hope that a deputation would wait upon the Home Secretary urging upon him to take further action in this matter.

Colonel Bolton, the water examiner, in his report on the state of the water-supply of the metropolis for August, says that the water of the Thames at the intakes of the several companies who take their supplies from that source was good from the 1st to the 13th Sept., when it became bad, and continued so until the 25th. After that date it was good for the rest of the month. The filtration to which the water was subjected before delivery for use failed to free it "from the effects of the organic matters, principally arising from vegetation brought down by the flood waters."

Dr. Stevenson, the medical officer of health for Paddington, has written to *The Times*, and, in view of the recent outbreak of scarlet fever in his district, determined by infected milk, and of the prevalence of the disease in rural districts from which the metropolitan milk-supply is in part derived, he advises that, during the coming winter, all milk used in the metropolis should be boiled. With regard to any objection which may be urged on this score, he states that it is the usual practice to boil milk before drinking it in France, Germany, Switzerland, and India.

The magistrate of the Southwark Police-court has granted a summons against an official of the vestry of that district for having removed and destroyed a feather bed, the property of a poor woman, on which a case of scarlet fever had been treated, no compensation having been made. The bed was removed ostensibly for disinfection, but destruction was substituted for disinfection. It was complained also that the bed, although the feathers had been put into a clean tick after the recovery of the case, had been carried away in a slop-cart.

The Thames Conservators recently took proceedings against the Wokingham Rural Sanitary Authority for permitting sewage to flow into the Kennet from a sewer into which opened the drains of six or eight houses. The case was heard at quarter sessions, when it was contended that the sewer was a private one, not under the control of the Sanitary Authority. The contention was accepted by the Bench, but a case was granted for a higher tribunal, the decision of the magistrates involving questions of very considerable importance with reference to sewers in rural sanitary districts.

Blandford, it would appear, has neither a proper water-supply nor proper sewerage, and its Local Authority turns a deaf ear to the remonstrances not only of its own ratepayers but even of the Local Government Board. It is reported that the Central Authority, finding written communications ineffectual, has declined further correspondence with the Local Authority, and intimated that the responsibility for any mischief arising from the insanitary condition of the place would rest with them. This is not the usual course adopted by the Local Government Board when default of sewerage is in question.

The surprisingly low death-rates in some of the suburbs of London is deserving of comment. Surbiton has recently reported a death-rate of 8·4 per 1000 of its estimated population, and last year its death-rate averaged only 11·4. Putney, moreover, has lately reported a death-rate of 10·9. Surbiton, however, we learn, is determined to have the health in the future even better than in the present, for it has adopted bye-laws relating to new buildings on the model of those suggested by the Local Government Board.

One of the Harbour Trustees of Barmouth, Mr. Wm. Jones, has withdrawn his name from the Trust, in consequence of the Local Board persisting, with the assent of his colleagues, in their intention to carry the drainage of the town into the harbour, and its having been represented to the Local Government Board that he was an assenting party. Mr. Jones has protested against this intention, believing that it will be an injury to the place by proving mischievous to the health of the East-end, and deterring outsiders from visiting it.

The Town Council of Beccles have adopted a report of the Sewage Committee recommending that the plans of Mr. T. Miller, C.E., be carried out for the utilisation of the town sewage, and that forty-five acres of land belonging to the Corporation, situated near Puttock-hill, be devoted to that purpose.

A suggestion has been made to the Mayor of Plymouth by Dr. Pearse and others, to plant the West Hoe and convert it into a garden, in the interest of the health of the inhabitants of the town.

Mr. G. Weston, the superintendent of the works department of the Paddington Vestry, after an inspection of the method of burning of town refuse followed in Leeds, has recommended his Vestry to adopt the same method for dealing with the Paddington refuse.

An immunity from zymotic diseases in Padstow during the past twelve months is attributed to an efficient ventilation of the sewers carried out not long ago.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality showed no further increase last week, notwithstanding the unseasonably low temperature that prevailed. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4830 births and 3244 deaths were registered last week. The births were 355 and the deaths 31 below the average weekly numbers during 1879. The deaths were within five of the number in the previous week, and were equal to an annual rate of 22·6 per 1000 of the estimated population, against 21·7 and 22·6 in the two preceding weeks. The lowest death-rates in the twenty towns last week were 19·3 in Bradford, 20·1 in Leeds, 21·3 in Newcastle-upon-Tyne, and 21·4 in Sheffield and in Portsmouth. The rates in the other towns ranged upwards to 25·3 in Salford, 25·5 in Norwich, 26·3 in Brighton, 26·9 in Liverpool, and 27·5 in Hull. During the past four weeks of the current quarter the death-rate in these towns averaged 22·1 per 1000, against 20·7 in the corresponding periods of the four years 1876–9.

The deaths referred to the seven principal zymotic diseases, which had steadily declined from 1239 to 472 in the nine preceding weeks, were last week 473; of these, 167 resulted from scarlet fever, 119 from diarrhœa, 63 from whooping-cough, and 47 from fever, principally enteric. The annual rate from these seven diseases averaged 3·3 per 1000 in the twenty towns, and ranged from 1·8 in Norwich to 6·3 and 6·4 in Sunderland and Leicester. The 167 deaths from scarlet fever showed a further increase upon the numbers in recent weeks, and exceeded the number registered in any previous week of the year; this disease showed the largest proportional fatality in Sunderland, Leicester, and Oldham. Measles was most fatal in Salford and Leicester. The highest death-rates from enteric fever occurred in Leicester, Salford, and Leeds. Of the 18 deaths from diphtheria, 10 were recorded in London, 2 in Birmingham, and 2 in Sheffield. The fatality of diarrhœa showed a further decline, but still exceeded the average for the season. Two more fatal cases of small-pox occurred in London, but not one in any of the nineteen other towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily declined from 116 to 77 in the five preceding weeks, rose again to 105 on Saturday last; no less than 38 new cases of small-pox were admitted to these hospitals during the week, against but 16 and 12 in the two previous weeks.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 323 in the seven preceding weeks, further rose to 333 last week, which, however, exceeded the corrected weekly average by but 7; 232 were attributed to bronchitis, and 66 to pneumonia. The annual death-rate from lung diseases was equal to 4·7 per 1000 in London, and 6·5 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 24·2 per 1000, against 22·4 and 19·6 in the two preceding weeks, and were 1·6 per 1000 above the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged last week from 14·2 and 20·6 in Leith and Aberdeen, to 29·5 and 44·8 in Greenock and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 135 and 107 in the two previous weeks, rose to 149 last week; they included 51 from scarlet fever, 34 from diarrhœa, 28 from diphtheria, 16 from whooping-cough, 13 from fever, 7 from measles, and not one from small-pox. The annual death-rate from these

seven diseases averaged 6·0 per 1000 in the eight towns, and was no less 2·7 above the average rate from the same diseases in the twenty English towns. The zymotic death-rate in the eight Scotch towns ranged from 1·9 and 4·0 in Perth and Aberdeen to 7·1 and 10·5 in Leith and Greenock; scarlet fever was exceptionally fatal in Leith, and the high zymotic rate in Greenock was principally due to whooping-cough and diphtheria. The fatal cases of scarlet fever in the eight towns, which had been 52 and 47 in the two preceding weeks, rose again to 51 last week, of which 26 occurred in Glasgow, 14 in Edinburgh, and 8 in Leith. The 13 deaths from fever, of which 8 were recorded in Glasgow, showed a further decline from those returned in the previous week. The deaths referred to diarrhœa, which in the six previous weeks had steadily declined from 69 to 14, rose again last week to 34, and showed a marked excess upon the average number in the corresponding weeks in recent years; the largest proportional fatality occurred in Dundee. The 28 fatal cases of diphtheria included 9 in Glasgow, 7 in Edinburgh, and 4 both in Greenock and Paisley. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 66, 98, and 120 in the three preceding weeks, were 121 last week; the annual death-rate from these diseases last week was equal to 4·8 per 1000 in the eight Scotch towns, against 4·2 in London.

HEALTH OF DUBLIN.

After a slow but steady decline in the rate of mortality in Dublin extending over several weeks an increase was recorded last week. The annual death-rate in the city, which had continuously decreased in the six preceding weeks from 39·3 to 33·7 per 1000, rose again last week to 34·8. During the past four weeks of the current quarter the death-rate in the city has averaged no less than 33·5 per 1000, against 20·8 in London, and 21·7 in Edinburgh. The 210 deaths in Dublin last week showed an increase of 13 upon those returned in the previous week, and included 36, or 17 per cent., which were referred to the seven principal zymotic diseases, corresponding with the number returned in the previous week; 13 resulted from scarlet fever, 10 from diarrhœa, 6 from fever, 6 from whooping-cough, 1 from measles, and not one either from small-pox or diphtheria. The annual death-rate from these diseases was equal to 6·0 per 1000 in Dublin, while it did not exceed 3·0 in London, and was 6·3 in Edinburgh. The 13 deaths from scarlet fever were within 3 of the number in the previous week; the fatal cases of diarrhœa, however, which had steadily declined from 44 to 7 in the five preceding weeks, rose again to 10 last week, and exceeded the average number in the corresponding week of recent years. The deaths referred both to whooping-cough and fever showed an increase upon the numbers in the previous weeks. The annual death-rate from fever (principally enteric), which had averaged rather less than 1 per 1000 during last quarter, has been equal to 1·1 per 1000 during the past four weeks. The deaths of infants showed a further decline last week from recent weekly numbers, whereas there was a marked increase in the number of deaths of elderly persons, owing probably to the large number recorded in public institutions.

REPORT OF THE LOCAL GOVERNMENT BOARD.

II.

THE observations of the Report on the Sale of Food and Drugs Act of 1875 are of unusual interest. It would appear that a considerable number of additional authorities have availed themselves of the advantages to be derived from a compliance with the provisions of this Act in regard to the appointment of an analyst. The number of authorities who had appointed analysts to the time of the report was 237, including the county authorities generally and a large majority of the boroughs. The number of analyses made during the year was 17,049, exceeding by 850 the number made during the previous year. The number would, no doubt, have been greater had it not happened that in a large number of districts the Act had been practically suspended by a doubt being entertained whether articles purchased for the purpose of analysis came within the meaning of the words "to the prejudice of the purchaser," contained within the 6th Section of the Act. In the end, however, a decision of the High Court of Justice, to the effect that the words in question did not, as had been contended, defeat the object of the Act, set the doubt at rest; and since this the decision has been embodied in an Amendment Act.

The articles most commonly found to be adulterated, taken in the order of adulteration from the highest to the lowest, so far as number of adulterated samples are concerned, were gin, spirits other than gin, drugs, milk, mustard, coffee, and butter.

With respect to spirits, the adulteration was of an innocuous character, water only being usually added.

As regards *drugs*, the remarks of the report are so important that we give them in detail:—"We regret to find that drugs continue to be largely adulterated, no less than 171 samples being reported against out of 613 submitted to analysis (25·4 per cent.). One result of adulteration of drugs is, that a person habituated to the use of a certain medicine in an adulterated state may be seriously affected by suddenly taking the genuine article. Thus 'paregoric' is a popular domestic medicine, practically identical with the officinal preparation formerly called compound tincture of opium, of which opium is the leading ingredient. Certain samples, however, of so-called paregoric, which were analysed in Derbyshire, contained no opium whatever, and large doses might be habitually taken without producing the sedative effect desired, whereas, if the patient were suddenly supplied with genuine paregoric, and were to take it in the quantities to which he had been accustomed, the change might be attended with unexpected and probably disastrous results. Similarly, in the case of sweet spirits of nitre, some samples were found entirely destitute of the nitrous ether, which is the most important constituent of the real compound; and others were diluted with amounts of water varying up to 40 per cent. of the whole. Cream of tartar has been found largely mixed with sulphate of lime; and tartaric acid with lead in quantity sufficient to injure health. Fluid magnesia has been reported to have only 3·3 grains of magnesia per fluid ounce, instead of 5 grains, which is its proper proportion; and tincture of rhubarb bought at one shop has been found of scarcely more than half the strength of that bought at another. We must repeat the opinion which we have expressed in former years, that this state of things demands serious attention, and that strong efforts should be made to secure the sale of genuine drugs of proper strength."

With respect to *milk*, although the number of samples found to be adulterated was large, it was less than in the previous year. Thus the percentage of adulteration had sunk in the provinces from 21·6 in 1878 to 19·4 in 1879; and in the metropolis from 25·4 to 23·3. The proportion of adulterated samples of milk varies much in different districts. This is very marked in the metropolis, and it is not clear how far these differences represent the relative advantages and disadvantages of the respective districts as regards milk-supply, or to what extent they depend on the system adopted of procuring samples, or on other conditions. Generally the adulteration consists of simple dilution with water; but sometimes chemistry is called in to aid in the adulteration, as in the case of a sample where just such an amount of sugar has been added as would bring the sample up to the specific gravity of genuine milk; or where an alkali has been introduced to conceal the badness of milk that has become sour.

The entire money loss sustained by the consumers of milk, to say nothing of the loss of nutriment, by the addition of water, must in the aggregate be enormous. The following attempt at an estimate of this loss for London is given:—"If we assume that in London each person consumes only two pints of milk weekly, or rather over a quarter of a pint daily (and this considering that over one-eighth of the entire population consists of children under five years of age, is probably a moderate estimate), the yearly consumption of the metropolis alone will be found to amount to nearly twenty-three million gallons a year, representing, at 5*d.* a quart, an expenditure not far short of two millions sterling. If nearly a quarter of this milk be adulterated with about 16 per cent. of added water (and this seems, from the analysts' reports, to be the average proportion), it follows (on the hypothesis that the samples analysed are fairly representative of the entire supply) that Londoners are paying between £70,000 and £80,000 a year for water sold under

the name of milk. This unremunerative outlay might certainly be diminished with advantage by the more extended use of the Sale of Food and Drugs Act."

It is further observed that persons who adulterate are not likely to be very particular as to the quality of water which they use for the purpose; and this is the more important, considering the part which water has frequently been shown to play in the dissemination of infectious disease.

The preparations ordinarily sold as mustard consist for the most part of mixtures of mustard flour, wheat flour, and a little turmeric, and so long as they are not palmed upon the purchaser as genuine mustard there is little to object to in them. The percentage of adulterated samples of coffee continues high, mainly from the practice of selling mixtures of chicory and coffee without adequate notice to the purchaser. In respect to butter, the substitution of "butterine" (a preparation made from beef-fat, mixed with milk and colouring agents, and churned), for the genuine article is seemingly on the increase. Opinions differ as to the wholesomeness of the preparation. The report quotes the following opinion of a public analyst of "high reputation" in this country, namely, that "genuine butterine, which can be purchased retail at less than one shilling a pound, is often more palatable and more digestible than the inferior Canadian and other butters which are washed up, and prepared for the English market, and sold at a little higher price." But, alas! the procuring even of genuine butterine appears to be not unattended with difficulty.

THE SERVICES.

Surgeon Macnamara is mentioned by the late General Brooke, in his despatches reporting the disaster at Maiwand, as having done very good service in attending the wounded during the retreat to Kandahar on that ill-fated day.

Deputy Surgeon-General A. Smith, C.B., late Principal Medical Officer of the Cabul Field Force, has arrived in England invalided for disease of the liver contracted during the campaign.

The appointment of Head of the Statistical Branch, War Office, Whitehall Yard, is vacant by the decease of Deputy Surgeon-General B. Tydd on the 24th ultimo.

MILITIA MEDICAL DEPARTMENT.—The undermentioned officers resign their commissions; also are permitted to retain their rank, and to continue to wear their uniform on retirement:—Surgeon-Major Edward Tweddell Atkinson, North York Militia, dated 3rd November, 1880; Surgeon-Major Joseph Marshall Lynn, Armagh Militia, dated 3rd November, 1880.

ADMIRALTY.—Staff-Surgeon Charles J. Fennell to the *Téméraire*; Staff-Surgeon John Malvany to Portsmouth Dockyard, in lieu of a surgeon; and Staff-Surgeon James Boadley to the *St. Vincent*, in lieu of a surgeon. Mr. Francis G. Wright has been appointed Surgeon (additional) to the *Duncan*. George H. L. Bankier and John A. MacMunn, M.B., surgeons, to the *Duke of Wellington* (additional), for temporary service at Haslar Hospital; and Joseph Crossley, M.D., surgeon, to the *Royal Adelaide* (additional), for temporary service at Plymouth Hospital.

Surgeon James C. Howard has been appointed Surgeon and Agent at Dungarvan and Ballynacourt.

Correspondence.

"Audi alteram partem."

FISH-EATING AND LEPROSY.

To the Editor of THE LANCET.

SIR,—In your journal of Oct. 30th Mr. James Startin records a case of leprosy with some comments on the hypothesis that fish-eating is the cause of that disease. He says that his case "could not possibly be ascribed to the eating of bad fish, for he [the patient] had none." Now, it so happens that I had made a note respecting the same case as supporting the fish hypothesis. I saw the man at the meeting of the Pathological Society, where Mr. Startin produced him and put to him the questions: "Are you fond of fish?" "Yes, very." "Did you eat fish in India?" "Whenever I could get it." He had been a soldier and had lived in various parts of India where leprosy is endemic. Those who believe that leprosy is due to some poison taken into the system in connexion with fish by no means think that it is necessary under all circumstances to eat fish largely. It is thought probable that in some cases small quantities of fish of a bad kind (and we especially suspect fish in hot climates and all fish that has been potted) may produce an effect which requires large quantities of less unwholesome kinds. I am well aware that such a suggestion is very difficult of credence to anyone who has not studied the facts of leprosy widely. I never yet met with a leprosy patient who did not deny at once that he had ever eaten bad fish, or who was even inclined to admit that he had eaten fish of any kind or in any quantity likely to make him ill. Usually, I believe, I have failed, even after full explanation, to make the patient think that the fish hypothesis was at all probable. The more such patients are questioned the more strongly they repudiate the accusation of having eaten decomposing fish, and the more they endeavour to minimise their admissions as to fish-eating at all. We must collect our facts very carefully if we would avoid being misled. A remarkable example of the risk of error occurred to me last summer. A sharp lad of thirteen was brought to my house by his mother. He was the subject of leprosy, and had lived in India. I put to his mother, in the boy's presence, my usual questions as to fish-eating habits. She told me that her husband was a connoisseur in fish, and always had it on his table when it was obtainable; and she added spontaneously, "This boy follows his father in the taste, and is much more fond of fish than his brothers and sisters." For clinical purposes I admitted the lad into the London Hospital, and gave a lecture on his case, part of which the lad heard. The result was that he told his dresser that he never had eaten any fish, that he had heard a doctor say it was not good for him and never took it. With this revised statement I was confronted at my next visit to the hospital. Which was to be trusted, the boy's statement or his mother's? I sent for his mother again; she positively assured me that he had never abstained from fish until I ordered him to do so, and that in India, for a boy, he had been a large fish eater. Of this, however, I am very sure, that whoever sees that boy in the future will be told by him that in India he never ate any fish.

In the earlier part of his narrative Mr. Startin records of his patient, "He states he had plenty of food, and very little fish; a few sardines and other tinned fish, but this he had only occasionally, and it was fresh." After such an admission, I cannot see how it can be fairly asserted that the disease, "could not possibly be ascribed to the eating of bad fish, for he had none." The man was a common soldier; he had lived thirteen years in India in various parts, and no doubt with very varying opportunities as regards the abundance of fish. I have recorded the man's replies to my questions, and I think that Mr. Startin goes very far beyond the facts when he asks us to accept as proved that none of the fish partaken of in those thirteen years was "bad," in the sense of being unwholesome. I have criticised Mr. Startin's statements at some length because they concern an exceedingly important question, and further because his narrative is a very good specimen of the kind of facts which are adduced to disprove the hypothesis which I with others think probably true. In the freest manner it is asserted of this or that patient who is a leper, "He had never eaten fish," or of some district where leprosy prevails that "fish is never used," but when the facts are sifted they always in my experience turn out to be of the same kind and value as those now before us. Some very remarkable instances of this I felt it my duty to comment on in my College of Surgeons lectures last summer. I have investigated the facts in detail, as much as I have been able; and my present experience is this—that I have not seen a single instance of leprosy in which the fish hypothesis was impossible; nor do I know of a single district where the facts, when sifted, are strongly opposed to it. I know well that there are many isolated cases, and many localities respecting which it seems at first sight improbable, but there are none in which it is impossible. Against the few seeming exceptions we must place the huge mass of evidence in support of this theory which the observations of leprosy in all parts of the world afford. Let any sceptic read Dr. Liveing's excellent lectures, keeping in mind during the perusal what I have ventured to suggest as

the possible potency of small quantities of fish, and the great proneness to exaggeration of statement on the part of many writers. Dr. Liveing himself combats the hypothesis, but I shall be much astonished if anyone can read his book without being strongly impressed with the absence of evidence in support of any other, and the great strength of that in reference to fish.

Before concluding may I ask Mr. Startin to give, either privately or through your pages, the references as regards his assertions as to Rawal Pindi, the Naga Hills, and the Nuggs of Arakan. If he will kindly do so, I will do my best to examine the facts, and will record my conclusions at a future time.

I am, Sir, yours, &c.,

JONATHAN HUTCHINSON.

Cavendish-square, W., Nov. 1st, 1880.

CHOLERA IN INDIA.

To the Editor of THE LANCET.

SIR,—In his report on the cholera history of 1875 and 1876, published a year ago by the Government of India, Dr. Bryden has done me the honour of criticising some statements made in my Punjab Sanitary Reports; and as I find that his observations have been taken as unanswerable in an official report on the cholera of 1878, because they were left unanswered, I shall feel obliged if you will allow me, even at this late date, to make a few remarks on the subject in the columns of THE LANCET. The discussion relates to a matter which deeply concerns the public welfare. The object of Dr. Bryden's remarks is to show that "in dealing with cholera, sanitation must be directed against the inevitable," the statements of mine which he criticises being intended to show that of all preventable epidemic diseases, none can be so readily and effectually prevented as cholera, provided the attack on it be conducted with the requisite skill.

I shall now quote Dr. Bryden's remarks on the statements he has selected for criticism. At page 310 of his report, he writes as follows:—"In 1867 the Meean Meer cantonment suffered heavily; in the great epidemic of 1869 it escaped altogether. The inference was made that the water-supply had been so secured from contamination that the outbreak of cholera in the future was not to be dreaded. The very next epidemic of 1872 swept down on the cantonments, and 185 cases occurred in a strength of 1300, of which 123 were fatal." These remarks refer to the following statement, made at page 17 of my Punjab Sanitary Report for 1868:—"The facts stated leave no room for doubt that there were abundant facilities at Meean Meer for the propagation of cholera through the drinking water, that by the closure of the cesspools those facilities were greatly lessened, and that by the disuse of the wells and their attached open reservoirs those facilities have been almost altogether removed. There are still some grave defects in the water-supply of the station, which, it is to be hoped, will be shortly removed; but even as matters now are, a repetition of the terrible epidemics of past days is impossible." Now, I must admit that in making this statement I fell into two errors—first, I altogether underrated the danger inherent in the grave defects referred to. I considered the disuse of wells situated within leakage distance of deep cesspit latrines a great improvement, but I under-estimated the risks of contamination to which the new source of supply, a small open canal cut, flowing through a thickly-inhabited country, was exposed, as is proved by the fact that the dead body of a native was removed from the cut, where it must have lain some time, only a few days before the arrival of Dr. Cunningham, when he visited Meean Meer to investigate the circumstances of the epidemic in question. Of course, this dead body could have had nothing to do with the causation of that epidemic; but the discovery of it, which was quite accidental, shows how greatly I under-estimated the "grave defects" referred to in the extract from my report above quoted. The second error I made was in under-estimating the force of the obstruction which the scheme then in contemplation for removing the "grave defects" would experience. In my simplicity I believed that the grave defects would be shortly removed, but to my sorrow nothing whatever had been done to remove them when I left the Punjab, seven years after the prediction, to the failure of which Dr. Bryden refers, was made. But terrible as was the epidemic of 1872, its horrors fell far short of those of 1856 to 1861, which were the ones I had in view when the passage was written. The epidemic of 1861 killed 24 per cent. of the troops; the epidemic of 1872 only 8 per cent. Considering all the circumstances of the case, I do not think that the partial failure of my prediction will be regarded as giving support to Dr. Bryden's thesis, that, as regards cholera, "sanitation must be directed against the inevitable." I adhere to my old opinion, that with a proper water-supply an epidemic of cholera would be impossible at Meean Meer; but at the same time I am by no means sanguine that the projects which have been so long under consideration will realise that happy deliverance.

Dr. Bryden's next observation, to which I desire to reply, is as follows:—"In the epidemic of 1869 the Lahore Lunatic Asylum lost 33 out of a strength of 200 inmates. No other community at Lahore suffered in any such ratio. The conclusion arrived at was that the sand through which the drinking water of the lunatics passed had been impregnated with cholera evacuations. Among the first to suffer in 1872 were these same lunatics. In the epidemic of 1875, out of a strength of 275 lunatics in the asylum, there were 27 cases and 19 deaths. It is not likely that the contingency of sand-poisoning should have occurred in three successive epidemics, and the Sanitary Commissioner for the Punjab does not urge this theory in writing of the outbreak of 1875." Does Dr. Bryden really suppose that there is only one means by which water may become contaminated? Under the system of supply now existing in India, the modes of contamination are infinite in variety. In my report for 1869, referring to the cholera virus, I said that in places "where the water-supply is entirely exposed to excremental pollution, no amount of personal precautions can bar its entrance into the stomach. So multitudinous are the avenues by which it effects a lodgment that it is impossible to guard them all—through the bath, in milk, in butter, on uncooked vegetables, or fruit; and finally, in drinking water it has innumerable facilities for reaching its breeding ground in the stomach and bowels." In 1872, as in 1875, there were many channels by which cholera-matter might have gained access to the stomachs and bowels of the lunatics. My report for 1869 only indicated the channel by which I considered that on that occasion the enemy had effected a lodgment in greatest force.

I shall now only add this: wherever the water-supply of a locality has been placed on a moderately satisfactory footing (unfortunately there are not many such places in India), the liability of the population to cholera has instantly been either greatly reduced or almost entirely extinguished. Everyone knows the truth of this statement as regards Calcutta and Bombay, where the European residents have for the last ten years been nearly as free from cholera as the inhabitants of London. But there are other instances which, if less known, are not less conclusive. Since the municipal water was laid on to Fort William eight years ago, the troops stationed in that once unhealthy place have been almost entirely free from cholera, although the men are still exposed to infection, when, as they will do, they go out into the purlieus of the town and suburbs, and also through milk, which it is next to impossible to get free from adulteration in Calcutta. They have, in fact, been almost as healthy as if they had been quartered in one of the healthiest camps in England. The death-rate for the six years ending in 1878 was only 10 per thousand of strength. The city of Nagpore is another illustration in point. This place was formerly a great sufferer from cholera. In 1871 water was laid on to the town, in iron pipes. There has not been a single epidemic in the town since, although stray cases have occurred from time to time, and the adjacent district has suffered severely on three different occasions. In 1878 there were 3356 cholera deaths in the Nagpore *district*, and only 69 in the town. In the district the ratio of cholera deaths was 54 in the town, 6 per 10,000 of population. There can be little doubt that many of the cases that occurred in the city contracted the infection in the neighbourhood external to the city. Kohat is another memorable illustration. This place, in Dr. Bryden's system, has a very mysterious importance attached to it as a great cholera focus. He speaks of the terrible outbreak of 1869 among the troops as "the result of a single afflatus of the cholera miasm." Certain it is that if, in former days, cholera got into the vicinity of the cantonment, it never failed to commit sad havoc among the troops. And

what is the case now? In 1872 the duct which supplies drinking water for the cantonment, and which is described in the Punjab Sanitary Report "as a lounge for dogs and a receptacle for the surface drainage of the station," was made tolerably safe against contamination. Two epidemics have since visited the locality. The one of 1876 passed over the station quite harmlessly. In 1878 the adjacent town and district suffered severely; but in the cantonment there were only eight deaths registered, and this though the place was crowded with 7000 troops and followers, brought there by the field operations in the Kurrum Valley, and was in a very insanitary state in consequence. The last case I shall refer to is that of the emigrant coolies on the Brahmaputra steamers. For nearly twenty years cholera had made terrible havoc among these poor people, in spite of all the efforts of the Bengal Government to prevent it. Four times on each voyage of about eighteen days the arrangements on board the steamers for the coolies were inspected by medical officers of the highest ability, and almost invariably pronounced very good—perfect cleanliness, good food, good clothing, plenty of room, excellent water. But in spite of all these advantages, the dreadful mortality continued from year to year, and it was a common thing for from thirty to sixty dead coolies to be thrown overboard in the course of a few days. All other explanation of these fearful catastrophes failing, it was concluded that the coolies, who mostly belonged to one of the primitive Indian races, had such a strong predisposition to cholera that human efforts were powerless to control it. And the Government had settled down in the belief that it was a struggle with the inevitable. But in the end it turned out that although four times in each voyage the water-supply was pronounced excellent, it was in reality extremely bad. The Bengal Government at length adopted structural precautions, which made it impossible for any but pure water to be used for any purpose whatever; and, behold, the predisposition of the coolies to cholera vanished, and the mortality among them became so small that the Superintendent of Emigration at Dhubri reports that he now finds it inconvenient to record it any longer in centesimal ratios. The results obtained in these cases, harmonising as they do with European experience, teach no doubtful lesson. They show that the struggle with cholera is not the hopeless contest that Dr. Bryden supposes.

In conclusion, let me say that, although I have for years felt it my duty to combat the views put forth on this subject by Dr. Bryden, I feel sure that that officer deserves the nation's gratitude for the herculean labour, under the guidance of brilliant genius, with which he has brought order into the once dreary chaos of Indian medical statistics.

I am, Sir, yours truly,

A. C. C. DE RENZY,
Deputy Surgeon-General, Punjab Frontier Force, late Sanitary Commissioner, Punjab.

ON THE COMPULSORY INTIMATION OF INFECTIOUS DISEASES IN EDINBURGH.

To the Editor of THE LANCET.

SIR,—At the last meeting of the Social Science Congress I gave the statistics relating to the carrying out of the compulsory intimation of infectious diseases. The Local Act in question came into operation on November 7th, 1879, and up to September 6th of the present year—a period of ten months—no fewer than 4502 intimations had been received by the authorities. These comprised: typhus, 22 cases; typhoid, 226 cases; diphtheria, 127 cases; scarlatina, 917 cases; measles, 3210 cases. In 412 cases the circumstances were such as to justify the removal of the patients to a hospital with the concurrence of the medical attendant.

As your readers are aware the intimations are made by the medical profession, who are furnished with suitable slips and stamped envelopes, and who receive 2*s.* 6*d.* for each intimation. Last July a sum of £519 was sent out to the profession, and so convinced is the Corporation of the value of the information thus received, that they have set aside £1000 to cover the expenses of the current year.

Our experiment has been a great success. No complaints have reached us from the medical profession, who have loyally assisted the authorities in carrying out what was feared would be an unworkable and objectionable clause. The information as to the existence of infectious disease has been prompt and effectual, which, I am convinced, would not have been the case had we trusted in great part to a poor, ignorant population to supply it. No doubt here we enjoy exceptional advantages from the large number of students attending our hospitals and dispensaries, and it is comparatively rare to find a person dying without medical advice. This is mainly due to the custom introduced by myself some twenty years ago, of causing an official inquiry to be made by the police into all cases of death occurring without a medical man seeing the patient during life. This inquiry entails on the relatives considerable annoyance, and has gradually led them to recognise the importance of seeking medical assistance. One of the subsidiary advantages of this procedure is, that the number of uncertified deaths in Edinburgh is very small.

To the health department the intimations have proved of great service—first, in showing how inadequate was the existing accommodation for infectious diseases in our various hospitals; and second, in enabling us to arrive at the true cause of outbreaks of these diseases, and thus prevent their spread.

Yours, &c.,

HENRY D. LITTLEJOHN, M.D.,
Edinburgh. Medical Officer of Health.

"DENTAL SURGEONS," "SURGEON-DENTISTS."

To the Editor of THE LANCET.

SIR,—As a Fellow of the Association of Surgeons practising Dental Surgery, permit me to offer you my best thanks for the very able remarks contained in your issue of last week relative to the continued abuse of the above-mentioned titles by totally unqualified persons, as well as by such as have merely a licence to practise dentistry from the College of Surgeons. The "Dentists Act," as you justly say, has become a delusion and a snare, but it is some satisfaction to know that but for the opposition this statute met with at the hands of those of us who, being surgeons by diploma, practise dentistry merely as a specialty of surgery, matters would have been far worse than they are now.

Let it not be forgotten that it was due to no want of zeal or activity on the part of the gentleman who framed this measure, that the medical profession was not crippled and harassed by a clause which he strove hard to include in the Dental Bill, making it illegal for qualified medical practitioners to style themselves or pursue their calling as dental surgeons until they had first registered their names on the list of his unqualified friends—friends from whom he has lately received a testimonial. This clause was after some trouble withdrawn, but it leaves no doubt as to the democratic nature of his views.

Again thanking you for the support which on every occasion you have given to those of us who have at heart the best interests of the profession, as well as that of the specialty we practise,

I am, faithfully yours,

W. DONALD NAPIER.

George-street, Hanover-square, Nov. 4th, 1880.

IRELAND.

(From our own Correspondent.)

UP to the present time candidates for the Fellowship of the Royal College of Surgeons in Ireland were permitted to send in applications for examination at irregular periods; but by a recent regulation of the Council it has been determined that for the future all candidates for the fellowship shall undergo examination at the ordinary sessional examinations. Doubts are entertained whether the new method will work as satisfactorily as the older system.

Introductory lectures have been given at several of the medical schools and hospitals in Dublin. Last week Mr. Swanzy, Professor of Ophthalmic Surgery in the Royal College of Surgeons, gave the inaugural address in the Medical School, and Dr. Quinlan at St. Vincent's Hospital; and last Monday addresses were delivered at the Meath Hospital, and Ledwich School of Medicine, by Messrs.

Hepburn and Benson respectively. The session commenced in October, but the strange regulation still prevails of having the introductories delivered in November instead of the early part of the previous month.

The election for Members of Council of the Surgical Society of Ireland took place on the 1st inst., when all the outgoing councillors were re-elected. Thirty-four members of the society recorded their votes.

Compulsory attendance on medical lectures has of late received a good deal of attention, and the Colleges of Surgeons and Physicians in Ireland have recently adopted regulations relative to this subject; while the University of Dublin has a stringent rule to the effect that no certificate shall be granted to any student who does not at all events attend three-fourths of the course delivered. It is, however, one thing to compel a student to attend a certain number of lectures, and quite another to guarantee that he derives instruction from such attendance. Here the various examining boards are at fault, except the Queen's Colleges, which carry out the following arrangement, that guards against an absence from lectures or a merely nominal attendance. For example, a daily roll-call is in force in every class, and class examinations are frequently held, while no credit is given for attendance when deficient preparation for lecture or deficient study of the subject is exhibited by the student. The class-certificate therefore of the Queen's College system not alone shows the payment of a fee and the entry of a name on the class-roll, but is besides a guarantee of continuous study of the subject lectured on on the part of the student during the whole session. The President of the Queen's College, Galway, in his recent report for the past session, draws particular attention to this method, as avoiding the well-known abuses of the lecture system.

A deputation from the Irish Medical Association waited, last Monday, on the Chief Secretary for Ireland with reference to the limitation of salaries of medical officers of health which exists, and also as to the exclusion of public health salaries and lunacy fees in computing retiring allowances for Poor-law medical officers. The scale proposed by the Local Government Board when the Public Health Act of 1874 became law was a maximum of one-fourth of the salary of the dispensary medical officer; but the maximum had been given in very few instances, and the Association were of opinion that even this amount would not admit of adequate remuneration for services zealously performed in most districts. In 1878 the Act now in force was introduced, it being understood that there should be no maximum scale, but that each salary should be decided on its merits; and it was contended that the average salary for medical officers of health was now only about half of the average maximum prescribed by the repealed Act of 1874. The question which the Association wished the Chief Secretary to consider was whether the Treasury had any right or power to enforce the repealed scale; for if it was intended that due effect should be given to the provisions of the Public Health Act, it was desirable that a liberal minimum scale of salary should be fixed, in order that proper and independent supervision should be provided, and that efficient officers should be equitably remunerated. The second subject brought forward was in connexion with superannuation, and it was pointed out that of late the Local Government Board had refused their sanction to a portion of the pension granted to two Poor-law medical officers, stating as their reason for so doing that they had been advised that salaries payable under the Public Health Act and fees for examination of lunatics should not be included in the computation of pensions, inasmuch as they were emoluments which accrued under Acts passed after the latest Superannuation Act. The Chief Secretary, in reply, referred to the important position which dispensary medical officers held throughout Ireland, and the faithful and devoted manner in which they discharged their duties; and observed that it was hard to expect sanitary improvements to be carried out unless the sanitary medical officers were satisfied with their position, and felt they were fairly treated in the matter of remuneration. He felt that a strong case had been made out, and although it was a matter for the Treasury he would promise that the views of the deputation would be considered.

The Visiting Committee of the Guardians of the South Dublin Union have recommended, in reference to Dr. MacCabe's recent report on the management of the Kilmainham Small-pox Hospital, that the clothes of every patient should, on admission, be destroyed, and that a nurse be appointed to each of the hospitals for night duty. The arrangement of having paid and responsible nurses for irresponsible pauper nurses is a great improvement, and the change will be carried out without delay.

The Committee of the Home for Incurables, Cork, have made an appeal for funds to complete the institution, one of the first of its kind in the United Kingdom. One thousand pounds are at the present time required to pay off existing charges on the building account, and a similar amount to complete the hospital. I have little doubt but that the necessary funds will shortly be subscribed for so deserving a charity.

At a meeting of the Cork Board of Guardians held last week, Dr. Wall reported that a woman named Keegan had been admitted to the Union Fever Hospital on the 25th ult., having been landed that day at Queenstown from one of the American emigrant steamers, and declared to be suffering from small-pox. It eventually proved, however, to be a case of varicella, and the patient was transferred to the shed originally constructed in the workhouse for the reception of small-pox patients, perfect isolation being secured. At the same meeting a deputation from the ratepayers waited on the Cork Board of Guardians and presented a memorial on the subject of the increased amount of stimulants used in the workhouse, but Dr. Callaghan, one of the medical officers, showed that the consumption in the Cork workhouse compared very favourably with the amount consumed in the North and South Dublin Unions. While the cost of stimulants in the former place averaged £10 per week, in the Dublin Unions the expenditure amounted to £25 weekly. After some discussion it was decided to refer the memorial to the medical officers to report on the subject on that day fortnight.

Dublin Hospital Sunday will be held on the 14th inst.

Dublin, Nov. 2nd, 1880.

PARIS.

(From our own Correspondent.)

THE chief event of last week was M. Pasteur's long promised communication to the Academy of Medicine, on the attenuation of the virus of fowl's cholera *(choléra des poules)*. The assertions of M. Pasteur are so important that it will be well to give a translation from the official bulletin. It is as follows:—

Of the different results which I have had the honour to communicate to the Academy concerning the affection commonly known as *choléra des poules*, I take the liberty of reminding you of the following.

(1) Cholera of fowls is a disease virulent in the highest degree. (2) The virus consists of a microscopic parasite that can be easily multiplied by culture, outside the body of the animal that the disease affects. Hence the possibility of observing the virus in a state of perfect purity, and the demonstration that it is the sole agent of disease and death. (3) The virus offers various degrees of virulence. Sometimes the disease is followed by death; sometimes, after having given rise to morbid symptoms of variable intensity, it ends in cure. (4) The differences observed in the power of the virus are not only the result of observations of the natural course of things, but can be produced by the experimenter at will. (5) As a rule, in all virulent diseases fowl's cholera does not recur, or rather recurrence happens in a degree which is inversely proportional to the severity of the first infection; and it is always possible to push the preservation so far that subsequent inoculation with the most virulent virus will produce no effect. (6) Without wishing to affirm anything at present as to the relation between variolous virus and human vaccine, it is evident from what precedes that in fowl's cholera there exist states of the virus which, relatively to the most virulent virus, perform the same office as human vaccine does in relation to variolous virus.

Vaccine virus produces a benign disease—vaccinia—which gives immunity from a graver disease, variola. In the same way fowl's cholera has states of attenuated virulence which cause the disease but not death, and in such conditions that the animal can, after recovery, submit to inoculation with a very virulent virus. The difference is great, however, in some respects between the two classes of facts, and it may be well to remark that as regards our knowledge, and our deductions, the advantage is with the study of fowl's cholera: for where

the relations between variola and vaccine are still a matter of controversy, we know that the attenuated virus of fowl's cholera is derived from the virulent virus, special to the disease, that we pass directly from the first to the second; in a word, that their fundamental nature is the same.

The time has now come to explain the chief assertion, which forms the basis of most of the preceding propositions—namely, that variable degrees of virulence exist in the cholera of fowls. Surely a strange result when it is considered that the virus of this affection is a microscopic organism, which can be handled in a state of perfect isolation, as one can experiment with the yeast of beer, or the mycoderma of vinegar. And yet if this mysterious datum of variable virulence is considered calmly, it will be recognised that it is probably common to the different species of this group of virulent diseases.

Where, then, is unicity in any of the scourges which compose this group? To quote an example, do we not see epidemics of severe variola, and others which are almost benign, without being able to explain the difference by external conditions of climate, or by the constitution of affected individuals? Do we not also see great contagions die out, to reappear later, and again become extinct?

The theory of the existence of variable intensities of the same virus is not then calculated to surprise either the physician or the well-informed, notwithstanding that it is of immense interest that it be scientifically established. In the particular case under consideration, the mystery lies in the circumstance that the virus being a microscopic parasite, the variations in its virulence depend upon the will of the observer. This is what I must establish with certainty.

Let us take as our starting-point the virus of the cholera in a very virulent condition, the most virulent possible, if we may use the expression. I have already made known a curious way of so obtaining it. It consists in collecting the virus from a fowl which has just died, not of the acute, but of the chronic disease. I have observed that the cholera is sometimes seen in this form. Such cases are rare, although it is not very difficult to meet with examples. Under these circumstances the fowl, after a severe illness, wastes away, but keeps alive for weeks or months. When it succumbs, which happens when the parasite, which had hitherto been localised in certain organs, passes into the blood and there develops, it will be observed that whatever may have been the original virulence of the virus when inoculated, that which is extracted from the blood of an animal which has taken long to die, is of considerable virulence, generally killing ten times out of ten, and twenty out of twenty.

This being stated, let us now make successive cultures of this virus, in a state of purity, in a decoction of fowl's muscle, taking each time the germ of the new culture in that which preceded it, and let us try the virulence of these different cultures. Observation shows that the virulence does not change in an appreciable degree. In other words, if we allow that two virulences are identical when, by operating on the same conditions upon the same number of animals of the same kind, the proportional mortality is the same, we also recognise that for our successive cultures the virulence is the same.

Hitherto I have neglected the interval between two successive cultures, that is to say, between one sowing-time and the following. Let us now consider this point, however small it may be apparently. For an interval of from one to eight days the successive virulences remain unchanged. For an interval of a fortnight the same result. For an interval of a month, six weeks, or two months even, no change will be observed in this respect. As, however, the interval increases, a few signs of little apparent value appear to indicate a weakening of the inoculated virus.

The rapidity of death, for example, if not the proportion of the mortality, becomes lessened. In the different series inoculated will be seen fowls which cling to life, very ill, and very lame, for the parasite, in its propagation through the muscles, has reached those of the thigh. The pericardites run a longer course; abscesses appear around the eye; the virus has lost, in fact, its *foudroyant* character. Let us now increase the periods between the successive cultures. Let us extend them to three, four, five, or eight months, and more, before studying the virulence of the development of the new microscopic being. Now the scene will change entirely. The differences in the successive virulences, which were hitherto *nil*, or at the most doubtful, are about to exhibit themselves with considerable effect.

With such intervals between the germ-sowings, we find upon culture that instead of identical virulences—that is to say, of a mortality of ten fowls in ten inoculations—the mortality falls progressively to nine, eight, seven, six, five, four, three, two, or one, in ten, and sometimes even there is no mortality at all; the disease manifests itself in all the individuals experimented on, and all recover. In other words, by simply changing the mode of culture, by simply separating the periods of germ-sowing, we have a means of obtaining progressively decreasing virulences, and, finally, a true vaccine virus, which does not kill, but communicates a benign disease, preservative from its mortal form.

It must not, however, be thought that in all these attenuations everything happens with a constant and mathematical regularity. One culture which has been kept for six months may still show considerable virulence, whilst another may have become greatly attenuated after three or four months. We shall see the explanation of these anomalies, which are, however, anomalous only in appearance. Sometimes, indeed, there is a sudden jump from a great degree of virulence to the death of the microscopic parasite in a very short interval, and on passing from one culture to another one is surprised by the impossibility of development. The parasite is dead. The death of the parasite is, in fact, a common circumstance, occurring constantly when there is a sufficient interval between the cultures.

And now the Academy is aware of the real motive of the silence which I have hitherto observed, and why I claimed a period of delay before making known my method of attenuation. Time was an element of the question.

In the course of these changes what becomes of the microscopic organism? In changing its degree of virulence in so marked a manner, is there any change of form or appearance? I will not say that there is no morphological relation between the parasite and the different degrees of virulence which it presents, but I must confess that I have hitherto been unable to detect any, and if it exists in reality the extreme smallness of the parasite prevents its recognition by the microscope. The cultures appear the same in all virulences. If slight differences are sometimes seen they would seem to be accidental only, for they disappear, or are produced in an inverse manner, in the next culture.

It is equally worthy of remark that, if one takes each variety of virulence as the starting-point of new successive cultures made at short intervals, each variety of virulence keeps its own special intensity. If, for instance, an attenuated virus only kills once in ten, it keeps this virulence when the successive cultures are not made with too great an interval between the germ-sowings.

Another point is worthy of remark, although it is in strict accordance with what has been observed—viz., that a germ-sowing interval which suffices to destroy an attenuated virus does not kill a more virulent virus, which may perhaps be again attenuated, but which does not then necessarily become extinct.

The important question must now be raised as to the cause of the diminution of the virulence. The cultures of the parasite are necessarily made in contact with the air, for our virus is an aerobe being, whose development is not possible without it. We naturally inquire whether the weakening influence on the quality of the virulence does not reside in the contact with the oxygen of the air. May not the little organism which constitutes the virus, abandoned in presence of pure air, to multiply in a field of culture, undergo a modification, which will remain permanent, even when the organism is withdrawn from the modifying influence?

We can inquire, moreover, whether any other principle of atmospheric air, a chemical or fluid principle, can account for a phenomenon which by its incomparable strangeness warrants every hypothesis.

It is easy to understand that the solution of this problem, should it be explained by our first hypothesis, that of the influence of the atmospheric oxygen, can be easily enough determined by experiment; for if the oxygen of the air is indeed the modifying agent of the virulence, we can easily have the proof by the effect of its suppression.

To this end let us conduct our cultures as follows:—A suitable quantity of decoction of fowl is sown with the seeds of our most virulent virus, and glass tubes are filled to three-quarters of their volume and then hermetically sealed. Owing to the air that still remains the development of the virus will begin, which is seen by an increasing cloudiness of the liquid; the progress of the culture then exhausts all the oxygen contained in the tube. Then the cloud falls, the virus is deposited on the sides of the tube, and the cultivat-

ing liquid clears up. Two or three days are required to produce this effect. The little organism is henceforth uninfluenced by oxygen, and will remain in the same condition as long as the tube is sealed. What will now become of its virulence? To be more sure, let us prepare a large number of such tubes, and, at the same time, an equal number of tubes of the same culture, but freely exposed to the action of pure air. We have said what becomes of these cultures exposed to the contact of the air. We know that they experience a progressive diminution of their virulence: we shall not return to them. Let us speak only of the cultures in closed tubes. If they be opened, one after a month's interval, after having made a culture by the germ-sowing of a portion of its contents, let its virulence be tried. Let another be opened after two months, and again another after three months, and so on with a fourth, fifth, sixth, seventh, eighth, ninth, and tenth tube at intervals of from two to ten months. There I will pause for a moment. It is remarkable—and experiment proves it—that the virulences are always identical with the original virulence, with that of the virus which was used in the preparation of the closed tubes. As to the cultures which have been exposed to the air, they are always either extinct or else possessed of very feeble virulence.

The question which we have studied is then solved: it is the oxygen of the air which weakens or extinguishes the virulence. This is probably more than an isolated fact, we may here be in possession of a principle. It may be hoped the inherent action of atmospheric oxygen, a natural force which is everywhere present, will be found efficacious in other virus. In any case, the probable grand generalisation of this method of the attenuation of virulence by a cosmic influence is a circumstance which is well worthy of attention. May we not presume henceforth that it is to this influence we may attribute the limitation of great epidemics?

The facts which I have had the honour to communicate to the Academy suggest numerous immediate or indirect inductions. As to these I am bound to the greatest reserve. I shall not feel authorised in publishing them until I am able to announce them as demonstrable truths."

Obituary.

DEP. INSP.-GEN. EDWARD GOODEVE, M.B., Q.H.P., LATE BENGAL ARMY.

THE members of the Indian Medical Services, as well as many others in India and at home, will learn with profound regret that Deputy Inspect.-Gen. Edward Goodeve, M.B., late Professor of Medicine, Senior Physician to the Medical College Hospital in Calcutta, and Honorary Physician to the Queen, died on the 27th of October last, at his residence in Stoke Bishop, near Bristol, at the age of sixty-four years. The following brief outline of his career (communicated) conveys but a faint impression of him whose services it so briefly records.

"Dr. Edward Goodeve was born at Bury Hall, Alverstone, Hants, on Jan. 27th, 1816. He was educated at private schools in England and France, and studied his profession under his brother William, who was a leading surgeon and a teacher of anatomy in Bristol, where he also was a very attentive student at the Royal Infirmary. He then went to London, where he became a dresser, under the late Sir W. Lawrence, for two years at St. Bartholomew's Hospital. Sir William was so much pleased with his pupil that when his work at the hospital was over and he had taken his degree, unsolicited he obtained for him an assistant-surgeon's appointment to Bengal.

"Dr. Edward Goodeve arrived in Calcutta early in 1841, and was shortly afterwards selected as travelling physician to the Bishop of Calcutta, Dr. Wilson, with whom he made several long expeditions. In 1843 he went to Cawnpore as civil surgeon, and remained in that capacity for several years; meantime, however, serving with the British forces in both Sutlej campaigns, for which he received a medal and two clasps (Chillianwallah and Guzerat). In 1850 he was appointed Assistant Apothecary-General and Professor of Materia Medica in the Calcutta Medical College. Shortly afterwards he relinquished these offices, and became Professor of Medicine and Physician to the College Hospital—offices which he held till he retired from India in 1864. In this position he rapidly acquired a large and important private practice. In 1864 he returned to England, and in 1866 he was sent by the Home Government to Constantinople to represent England in the International Cholera Commission.

"On his return to London he established himself as a consulting physician, but his health giving way, he gave up entirely the practice of his profession and retired into the country, finally living during the last few years at Drinagh, Stoke Bishop, a beautifully-situated villa on the banks of the Avon, about two miles from Clifton. He contributed two most valuable articles (on Diarrhœa and Cholera) to 'Reynolds' System of Medicine.' He married twice—firstly, Miss Renoux, of Jersey, in 1842; secondly, Miss Allen, in 1866, but he left no children alive. Some years ago he suffered from a slight attack of paralysis, from the effects of which he never entirely recovered. He had been for a long time in bad health, and though the symptoms were rather obscure, he doubtless sank at last from cerebral affection, seriously injuring his digestive and respiratory functions, and death appeared to be caused by a sudden and violent accession of the disease."

The death of this distinguished medical officer has removed one of the brightest ornaments of the old Indian Medical Service, a most able teacher and accomplished gentleman, one in whom centred all that did honour to the office of physician, and gave grace and charm to the character of friend. His whole career from the day he landed in India was one of marked utility. His military services during the Sutlej campaigns were important, and distinguished by as much ready promptitude and skill in surgical operations in the field as by devoted attention to the sick and wounded in hospital.

But it was in Calcutta, during his long connexion with the Medical College and Hospital, as Professor of Medicine and Senior Physician, that his great work was done and his merits became conspicuous. It was there, as a teacher and among the European and native population (for he was equally well known to all), that he acquired the fame that will, in India as well as at home, attach to his name as a physician, and that gave him the high position that he held among his brethren.

Of retiring and undemonstrative nature, his judgment, skill, and knowledge of disease were yet of the highest order, while his powers of diagnosis were only excelled by his skill in treatment. Deeply versed in the knowledge of pathology, and excellent alike as physician or surgeon, he rapidly attained pre-eminence. His most valuable researches on dysentery, diarrhœa, enteric fever, cholera, and the so-called red-fever of Bengal, form the most important of his written contributions to the annals of medicine.

His name still is, and long will be, familiar as a household word in Bengal. His pupils, scattered over India and Ceylon, no less than his colleagues and friends everywhere, will deplore his death, whilst they hold him in grateful remembrance; for no medical officer ever made a deeper mark, none will be longer remembered as a teacher and benefactor of the natives of India, than Edward Goodeve.

In addition to the duties he performed in connexion with the Medical College and Hospital, he was a member and sometime President of the Faculty of Medicine in the Calcutta University, of which he was also a Fellow and an Examiner in Medicine; he was moreover an honorary Physician to the Queen. But besides and above all this, he was the physician in whom all reposed confidence, and was much beloved by all who enjoyed the privilege of his friendship.

His whole life and conduct form a beautiful model, on which a young medical officer might well endeavour to frame his own career.

EDWIN HEARNE, J.P., M.B. LOND., F.R.C.S.

WE have to record the death of Dr. Edwin Hearne, who died at Southampton on the 22nd ult. of apoplexy. Dr. Hearne was born near Taunton in the year 1820. His father was a large farmer, descended from an old Somersetshire family. Dr. Hearne was originally intended for a business career, but his tastes being of a more ambitious nature, he entered as a medical student at University College in 1840. He there distinguished himself by carrying off many class prizes, and in 1844 graduated M.B. at the University of London, taking honours in physiology and comparative

anatomy, as well as in medicine and surgery. He was afterwards house-surgeon at University College Hospital, and was a favourite pupil of Liston. So anxious was he to qualify for the highest position in his profession, of which he was an ardent lover, that he spent some time in studying at the Paris hospitals. On his return he happened to land at Southampton, and was so struck by the improving look of the place that he settled there in 1845 and soon acquired a large practice. He was a most accomplished surgeon and an expert operator. In politics he was a very advanced Liberal, and he worked with heart and soul in the cause. His mind was original and thoughtful, and his temperament vigorous and bold. This continually involved him in scientific and political controversies.

In 1864 the wear and tear of his large practice, combined with his other work, brought on a painful affection of the nervous system, which resulted in torticollis. This obliged him to give up active practice, and he retired to Germany for a time, but by the use of subcutaneous injections of morphia he subdued to a great extent the distortion of the neck, and resumed practice as a consulting physician. His health, however, was never sufficiently re-established for him to do much work, yet he took great interest in social and municipal matters, and became also an ardent sportsman. He was well known amongst hunting men as a straight and fearless rider to hounds; and in *Bailey's Magazine* the "White Doctor," as he is called, is described as a hard man to beat.

Dr. Hearne was a frequent writer, both on medical questions and in the local press. He was for some time a member of the Borough Council, and had been a magistrate for Southampton during the past fifteen or sixteen years. Few men have lived more active lives or sustained more arduous labour; and though possessed of singular vehemence of temperament, there was a softer side to his nature, which often found expression in acts of kindness and consideration unknown to the outside world.

THOMAS HOPGOOD, M.R.C.S.

MR. HOPGOOD (whose death was announced in our issue of Oct. 23rd) was the last of the old practitioners of Chipping Norton, Oxfordshire. He had been in practice in that town since his qualification in 1846. For some time past the deceased gentleman had been in failing health, never having recovered a severe illness he had two and a half years ago, when he was suddenly seized with severe rigors and became unconscious after exposure for several hours in the cold upon business connected with the office of mayor. During the past winter he was confined to his bed for some time from an attack of bronchitis. From this, however, he so far recovered as to be able to resume his professional duties. A few weeks since he became seriously indisposed, and died on the 8th ult. He was not one of the old school who cared little about the progress of medicine and surgery, but his greatest interest was in hygiene, and he lived, as he said, to see the greatest improvement that had ever taken place in the town—the supply of good water, and with it the almost total disappearance of fever. Mr. Hopgood had for a lengthened period taken an active part in the municipal affairs of the town. He was elected a member of the Council in the year 1862, and on the death of Mr. Alderman Rawlinson was promoted to an aldermanic chair, which he occupied up to the time of his death. Mr. Hopgood had also three times filled the office of chief magistrate of the borough—viz., in 1863, 1873, and 1877. He leaves three sons, all of whom are in the profession. Mr. Hopgood during his last severe illness was attended by Dr. Hutchinson, of Chipping Norton.

A MEETING, over which Sir Joseph Fayrer presided, was held on Monday in the Langham Hotel, at which it was determined to form a Sanitary Assurance Association "for the purpose of securing to its members, at a minimum cost, those advantages which the progress of sanitary science has made available." It was agreed that Professor de Chaumont, F.R.S., Professor Hayter Lewis, F.R.I.B.A., Mr. H. Rutherford, Professor Corfield, M.D., Mr. George Aitcheson, and Mr. Mark H. Judge be appointed a provisional committee, with Professor Corfield as chief sanitary officer, and Mr. Judge as surveyor *pro tem.*, and that they be requested to organise the association on the basis of a prospectus which was circulated, and report to a future meeting.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Members of the College on Oct. 28th:—

Davy, Henry, M.B. Lond., Lancaster House, Savoy-street.
Heron, George Allen, M.D. Glas., Margaret-street.
Mann, John Dixon, M.D. St. And., Manchester.
Smith, Robert, M.D. Aberd., Charing-cross Hospital.

On the same day the following gentlemen were admitted Licentiates of the College:—

Bulteel, Marcus Henry, Stonehouse, Plymouth.
Corbould, Henry Francis, Thornton-heath.
Cotterell, Edward, University Hospital.
Henry, Joseph, Camden-square.
Hubbard, Henry William, Ford-park, Plymouth.
Jennings, Edward, George-street, Manchester-square.
Sisley, Richard, Park-row.
Smith, George Munro, Clifton.
Swale, Harold, Leicester-place.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 28th:—

Marlow, Frank William, Wantage, Berks.
Powell, Simpson, Upper Woburn-place.
Whiting, John, Ringsfields, Beccles.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Charles Frederick Burton, Queen's College, Birmingham; Robert Cheyne, King's College; Samuel Wyborn, Charing-cross Hospital.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW AND ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH. At the October sittings of the Examiners at Glasgow the following gentleman passed the First Examination:—

Conway, Thomas A., Glasgow.

The following gentlemen passed the Second Examination, and were admitted Licentiates of the two bodies:—

Darwin, Geo. A., Manchester.
Dickson, Peter S., Edinburgh.
Ferguson, John, M.B. Toronto.
Hamilton, Oliphant, Glasgow.
Hannah, Fredk. R., Bombay.
Jones, A. T. L., Glasgow.
MacDonald, Charles, Tilsonburg, Canada.
M'Kechnie, Neil, M.B. Ontario.
Rawes, Geo. B., Liverpool.
Ross, James, Glasgow.
Roberts, Robert, Glasgow.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the October quarterly examination the following gentlemen passed the First Examination:—

Clark, M., Glasgow.
Crowther, G. D., Luddenden.
Dickson, F. H., Glasgow.
Hitchen, Thos. C., Birmingham.
Jardine, Peter F., Glasgow.
McKee, Thomas, Glasgow.
Owen, John W., Glasgow.
Parke, John L., Manchester.

The following gentlemen passed the Second Examination, and were admitted Licentiates:—

Bhabha, S. D., Glasgow.
Deene, Ed., Wincanton.
Forsyth, David, Glasgow.
Gilroy, James, Paisley.
Govan, Joseph, Limerick.
Jean-Louis, N., Mauritius.
Le Page, John F., Durham.
Mackintosh, A., Scarborough.
Wigmore, James, M.D., Tiverton.

IT is proposed to purchase additional land in view of the extension of the South Yorkshire Pauper Lunatic Asylum.

JOHN WILLIAM BUSTEED, L.R.C.S.I., and John Ireland Donovan, M.D., have been placed on the Commission of the Peace, the former for the county of Kerry; the latter for the county of Cork.

IN connexion with the St. John Ambulance Association, an advanced course for certificated females is being conducted at the Royal Hospital for Children and Women, Waterloo-road, where, after each lecture, the students are taken round a ward and given practical hints on nursing and the treatment of the sick.

THE 21st annual Hospital Sunday collection in aid of the local medical charities was made in the various churches and chapels of Birmingham on the 31st ult., the proceeds being devoted this year to the General Hospital. The receipts in most cases showed a slight falling off as compared with those of the two previous years.

WE have received from Messrs. Eade & Caulfield, of Princes-street, Cavendish-square, a copy of a photographic group of the members of the medical and surgical staff of St. Bartholomew's Hospital. The picture contains forty-four portraits, from life, artistically arranged, enclosed in a neat frame of black and gold. The cost is one guinea.

UNIVERSITY OF DURHAM.—Examinations for (1) the practitioner's degree of M.D., (2) the degree of M.D., (3) the degree of M.B., (4) the degree of M.S., will commence on Monday, Dec. 6th, 1880. The examinations are held at Newcastle-upon-Tyne. The names of candidates should be forwarded to the Registrar, Dr. Luke Armstrong, 26, Clayton-street West, Newcastle-upon-Tyne, on or before the 8th inst.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES. By the will of Mr. W. H. Poynder, late of Hartham Park, the Royal United Hospital, Bath, and the Salisbury Infirmary become entitled to £1000 each, and St. Bartholomew's Hospital to £500. Mr. T. S. Wall, late of Maida Vale, bequeathed £100 each to St. Mary's Hospital, the Western Dispensary, and the Royal Hospital for Incurables. Mr. E. Howard, late of Crowhurst, bequeathed £100 each to the Sussex County Hospital, the Cancer Hospital, Brompton, and the London Hospital. The executors of Miss Caroline Brown, late of Cheltenham, have paid over to the treasurers of the General Infirmary, Leeds, and of the British Medical Benevolent Fund, the sum of £2987 16*s.* 11*d.* each, being their respective shares of the testator's residuary personal estate.

ASSOCIATION OF REGISTRARS OF THE METROPOLITAN HOSPITALS.—At a meeting held at King's College Hospital on Nov. 3rd (Dr. Mahomed in the chair), the following officers were elected:—Dr. Mahomed (Guy's), President and Chairman of Medical Section; Mr. Harrison Cripps (St. Bartholomew's), Vice-President and Chairman of Surgical Section; Dr. Dunbar (St. George's), General Secretary, and Secretary of Medical Section; Mr. Boyd (University), Secretary of Surgical Section. The following resolutions were carried *nem. con.*:—1. That the Association will draw up a form of index of medical and surgical cases available for the use of each hospital. 2. That it will, if possible, compile on the same model a combined index of cases admitted into the metropolitan hospitals during the year. 3. That one of the objects of the Association be to co-operate for the investigation of questions of obscurity. 4. That the secretaries of the medical and surgical sub-committees shall summon a meeting for Wednesday, Nov. 17th, at 8 P.M. at King's College Hospital, for the purpose of drawing up a form of index of medical and surgical diseases.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

AINLEY, D., L.R.C.P.Ed., M.R.C.S.E., has been reappointed Medical Officer of Health for the Borough of Halifax. £100 per annum.

BARRY, E. J., M.D., M.R.C.S.E., has been appointed Medical Officer for the Fourth District of the Hollinbourn Union.

BODKIN, P. J. T., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Tuam.

BURKE, J. M., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Carney-street No. 2 Dispensary District of the Sligo Union, vice O'Neill, resigned.

CHARLTON, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Fifth District of the East Ashford Union.

DALSTON, G. W., M.R.C.S.E., has been appointed Medical Officer for the Brough District of the East Ward Union.

DALY, J. C., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Borrisokane Dispensary of the Borrisokane Union.

EWBANK, F., L.R.C.P., M.R.C.S.E., has been appointed Resident Surgeon to the Cheltenham General Hospital and Dispensary, vice Taylor, resigned.

FIRTH, E., M.B., C.M., has been appointed Medical Officer to the Debenham District of the Bosmere and Claydon Union, vice W. W. Cuthbert, resigned.

FRAZER, W., B.A., M.D., has been appointed a Medical Officer to the Boscombe Infirmary, Bournemouth.

GARDEN, R. J., M.D., C.M., has been appointed Surgeon to the Aberdeen Royal Infirmary.

HANRAHAN, J. A., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Hollymount Dispensary District of the Ballinrobe Union, vice Hawkins, resigned.

HEDLEY, E. A., M.R.C.S.E., has been appointed Medical Officer to the Felton District of the Alnwick Union.

HEMMING, W. D., F.R.C.S.Ed., has been appointed a Medical Officer to the Boscombe Infirmary, Bournemouth.

KEER, G. E., L.R.C.P., has been appointed Medical Officer to the Seventh District of the Woodbridge Union, vice Hughes, deceased.

LOUGH, J. J., M.B., has been appointed Medical Officer to the N. Postal District (Islington Division), vice Harston, resigned.

NEVE, A., L.R.C.S.Ed., L.R.C.P.Ed., has been appointed Resident Surgeon to the Livingstone Memorial Medical Mission Dispensary, Edinburgh.

PIRRIE, W., M.D., F.R.S.Ed., has been appointed Consulting Surgeon to the Aberdeen Royal Infirmary.

SYMONS, G. F., M.R.C.S.E., has been appointed Resident Medical Officer to the Brixton Dispensary, Water-lane.

TAYLOR, R. S., M.B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Broadsall District of the Shardlow Union.

TURNER, J. E., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Tuam, vice T. B. Turner, deceased.

WANOSTROCHT, V., M.B., C.M., has been appointed Medical Officer for the Seventh District of the York Union.

WHITE, J., F.R.C.S.E., has been appointed Consulting Surgeon to the Nottingham General Hospital, on retiring, after twenty-one years, from the office of Surgeon.

WILKINSON, Mr. O., has been reappointed Public Analyst for the Borough of Stockport for one year.

WILSON, W. J., L.R.C.P.Ed., M.R.C.S.E., L.F.P.S.G., has been appointed Medical Referee to the Midland Counties Permanent Relief Fund.

Births, Marriages, and Deaths.

BIRTHS.

BOWEN.—On the 22rd ult., at Kirkley, South Lowestoft, the wife of Edward Bowen, M.R.C.S.E., of a daughter.

BOYS.—On the 25th ult., at Pill, Bristol, the wife of A. H. Boys, M.B., of a son.

CREED.—On the 30th ult., at Rathkeale House, Girdler's-road, West Kensington-park, the wife of C. P. Creed, M.R.C.S.E., of a son (still-born).

KESTEVEN.—On the 31st ult., at Holloway-road, N., the wife of W. Henry Kesteven, M.R.C.S.E., of a daughter.

MORGAN.—On the 4th ult., at Mussooree, India, the wife of Surgeon-Major Jerome Morgan (prematurely), of a daughter, who survived her birth but a short time.

SCOVIL.—On the 27th ult., at Hove, Brighton, the wife of Francis S. Scovil, M.R.C.S.E., of a daughter.

SHEPHERD.—On the 4th Sept., the wife of Charles Carter Shepherd, B.M., of the General Hospital, W.I., of a son.

MARRIAGES.

BROWNE—SIMPSON.—On the 16th ult., at St. George's Church, Stonehouse, Samuel Browne, M.D., son of Dr. Browne, J.P., Belfast, to Ada Eliza, daughter of the late George Simpson, Surgeon, of Gower-street, London.

DE POURTALES—MARCET.—On the 28th ult., at Genthod Parish Church, Geneva, Count Hermann de Pourtalès, of the Royal Prussian Cuirassier Guards, to Marguerite (Daisy), only daughter of W. Marcet, M.D., F.R.S., of Grosvenor-street, and Yvoire, Lake of Geneva.

HOGG—JENKYN.—On the 30th ult., at St. Mary's, Ealing, Arthur John Hogg, M.R.C.S.E., of Netley Villas, Ealing, to Ellen Eugenie, eldest daughter of Osborn Jenkyn, Esq., of Woodside, Ealing-common.

LEWTAS—WILSON.—On the 26th ult., at the Parish Church, Kingston-on-the-Thames, John Lewtas, Surgeon, Queen's Own Corps of Guides, Murdan, Punjaub, to Annie Chambers, second daughter of the late H. T. Wilson, Esq., of Liverpool.

LOWNDES—LEWIS.—On the 26th ult., at St. Nicholas Parish Church, Liverpool, Frederick Walter Lowndes, M.R.C.S.E., of Liverpool, to Elizabeth Ellen, youngest daughter of the late John Lewis, of Helsby, Cheshire.

MUMBY—ROSS.—On the 2nd inst., at Milton, Portsmouth, by the Rev. P. H. Good, M.A. (uncle of the bridegroom), Bonner Harris Mumby, M.B., to Nellie, only daughter of Alexander Ross, of Southsea.

DEATHS.

BEALE.—On the 25th ult., at Royal-crescent, Cheltenham, Anthony Beale, Esq., late Surgeon-Major, Bengal Army.

COOPER.—On the 31st ult., at his residence, Croydon, George Cooper, M.R.C.S.E., in his 70th year.

GOODEVE.—On the 27th ult., at Drinagh, Stoke Bishop, near Bristol, Edward Goodeve, M.B., Deputy Inspector-General of Hospitals (Bengal), and Honorary Physician to the Queen, aged 64.

MOORE.—On the 30th ult., at Hastings, George Moore, M.D., M.R.C.P., aged 77.

PAINTER.—On the 31st ult., at Beaufort-gardens, S.W., Richard Budd Painter, M.D., F.R.C.S., aged 54.

STRATON.—On the 17th ult., Alexander Straton, M.D., of Steeple Langford, aged 64.

WHITEFOORD.—On the 22th ult., at Albany-street, Caleb C. Whitefoord, M.R.C.S.E., aged 35.

WILKINSON.—On the 25th ult., T. J. Wilkinson, M.R.C.S.E., late of Manchester.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

An Elementary Treatise on the Function of Vision and its Anomalies. By Dr. Giraud-Teulon. Translated from the Second French Edition by Lloyd Owen, F.R.C.S.I. pp. 158.

BATSFORD, B. T.

The Plumber and Sanitary Houses. By S. Stevens Hellyer. Second Edition. pp. 321. With Engravings.

BLACK, A. & C.

An Introduction to the Study of Fishes. By A. C. L. G. Günther, M.A., M.D., &c. pp. 720. With Illustrations.

CHURCHILL, J. & A., London.

St. George's Hospital Reports. Vol. X. 1879. pp. 602.

Croonian Lectures on some Points in the Pathology and Treatment of Typhoid Fever. By W. Cayley, M.D., F.R.C.P. pp. 126.

HEYWOOD, J., Manchester.

Health Lectures delivered in Manchester, 1878-79-80.

HODDER & STOUGHTON, London.

Health Studies. A Third Course of Lectures delivered in the Lecture Hall of the Young Men's Christian Association. By H. S. Paterson, M.D. pp. 209.

LEWIS, H. K., London.

Practical Histology and Pathology. By Heneage Gibbes, M.B. pp. 107.

Dwelling Houses, their Sanitary Construction and Arrangements. By Dr. W. H. Corfield. pp. 112. With Illustrations.

LINDSAY & BLAKISTON, Philadelphia; TRÜBNER & Co., London.

A Practical Treatise on Mechanical Dentistry. By Joseph Richardson, D.D.S., M.D. Third Edition, Revised and Enlarged. pp. 433. With 185 Illustrations.

MACLACHLAN & STEWART, Edinburgh.

Notebook on Materia Medica, Pharmacology, and Therapeutics. By R. E. Scoresby-Jackson, M.D. &c. Fourth Edition, Revised and brought down to the present date, by Dr. F. W. Moinet, F.R.S.E. pp. 470.

MACMILLAN & Co., London.

Ideal Chemistry. A Lecture. By Sir B. C. Brodie, Bart., D.C.L., F.R.S. pp. 64.

SMITH, ELDER, & Co., London.

Atlas of Histology. By E. Klein, M.D., F.R.S., and E. Noble Smith, L.R.C.P., M.R.C.S. Part XII.

The Descriptive Atlas of Anatomy. A Representation of the Anatomy of the Human Body in 92 royal 4to Plates, containing 550 figures.

Note sur quelques particularités de l'Action Æsthésiogène des Vésicatoires. Par le Dr. J. Grasset.—La Médecine du Passé et la Médecine de l'Avenir. Par Dr. A. Juhel.—Indications for Treatment in Fractures at the Elbow. By Dr. L. S. Pilcher.—Clinica Oftalmológica. Del Dr. P. F. Roberts.—The Form, Cause, and Treatment of Tinnitus Aurium. By W. D. Hemming, F.R.C.S.Ed.—Nieuwe wyze van Behandling der Aneurysmata. Door J. E. Van der Meulen.—Westminster Review, October.—Vox Populi: a Sequel to the Philosophy of Voice. By C. Lunn. (Reeves, Fleet-street.)—Proceedings of the Medical Society of the County of Kings.—Protection of the Insane. By Dr. E. C. Seguin.—Kopf on Diet and Hygiene.—Sull' Intestinale Cronico. Studio Clinico del Prof. G. Corradi.—Della Litolapassia o Litotrizia a Processo Rapido. Del Dr. G. Ciati.—Victorian Review, September.—L'Amministratione Sanitaria in Egitto.—Du Myxœdème. Par W. B. Hadden.—Hints on the Application of the Poro-plastic Jacket. By Paul Swain, F.R.C.S. (Brendon, Plymouth.)—Compendium der Psychiatrie. Von Dr. J. Weiss. (Bermann and Altmann, Wien.)—Note on Bedroom Ventilation. By Lawson Tait, F.R.C.S.—Anales del Circulo Medico Argentino.—Monthly Review of Dental Surgery, October.—The Carisbrooke Magazine, October. (Simpkin, Marshall, and Co.)—Revue des Sciences Médicales, Octobre. (Masson, Paris.)—Statistical Tables of the Patients under Treatment in St. Bartholomew's Hospital during 1879.—Rocky Mountain Medical Review. (Tribe and Jefferay, Colorado.)—De l'Influence des Eaux Malsaines sur le Développement du Typhus Exanthématique. Par le Dr. Robinski. (Asselin, Paris.)—Bulletin de l'Académie de Médecine, Nos. XXXIX. and XL.—Journal of Psychological Medicine, Vol. VI., Part II. (Baillière, Tindall, and Cox.)—Indican in Health and Disease. By H. N. Heineman, M.D. (Putnam's Sons, New York.)—State Medicine and the Compulsory Registration of Disease. By Dr. J. M'G. Maclagan. (Knight and Co.)—The Medical Practitioner and his Social Position. By Dr. J. Meredith.—Virchow's Archiv.—The Magazine of Art, Part I., New Series. (Cassell and Co.)—Smith's Visiting List, 1881.—Mittheilungen aus der Ophthalmiatrischen Klinik in Tübingen. Herausgegeben von Dr. Albrecht Nagel.—Zweites Heft. Die Typhus Epidemie im Füsilier-Bataillon zu Tübingen im Winter 1876-77. Von Dr. Hermann Schmidt. (Verlag der H. Laupp'schen Buchhandlung.)—Carisbrooke Magazine, November. (Simpkin, Marshall, and Co.) Sunday Magazine, November; Good Words, November; Good Cheer; Little Snow-flakes: Christmas Stories for the Young. (Isbister and Co.)—The Veterinary Journal, November.—Italian Dairy Produce. A Sketch by C. Pavia.—On Renascence Drama, or History made Visible. By Wm. Thomson, F.R.C.S., F.L.S. (Sands and McDougall, Melbourne.)—Archives of Ophthalmology; Archives of Otology. Edited by Drs. Knapp and Moos. (Putnam's Sons, New York.)—Enumeration, Classification, and Causation of Idiocy. By Dr. I. N. Kerlin.—Contemporary Review, November. (Strahan and Co.)—London Smoke and Fog. By F. Edwards, jun. (Longmans.)—Some Practical Suggestions in the Treatment of Diphtheria. By Dr. R. J. Nunn. (Evans, Baltimore.)—Fraser's Magazine, November.

INTERNATIONAL MEDICAL CONGRESS.

A MEETING of the Executive Committee took place at the College of Physicians on Tuesday, the 19th of October, Dr. J. Risdon Bennett in the chair. The Secretary-General, Mr. MacCormac, presented a statement of the work which had been done since the last meeting of the Committee on August 3rd. A circular announcing the meeting of the Congress in London next year, together with a list of the proposed officers of the various sections, and a provisional list of subscriptions, have been sent to every medical man whose name stands on the Register. In addition to these circulars in English, circulars in French have been widely distributed in France, Holland, Belgium, Norway, Sweden, Denmark, Switzerland, Portugal, and Russia. Circulars in German have been sent to the principal medical men throughout Germany and Austro-Hungary. Circulars in Italian have been sent out in Italy; and circulars in Spanish in Spain. A special circular in English has been sent to the leading medical men in the Northern and Southern States of America; and, in addition to all these, a number of circulars have been sent to medical men residing in various other parts of the world. Lastly, a copy of one of the circulars and of the proposed list of officers has been sent to a number of the home and foreign medical journals, and in several of these cordial and appreciative notices have already appeared concerning the intended Congress. Among others, the following medical men have already announced their intention to attend:—Professor Langenbeck, Berlin; Professor Billroth, Wien; Professor Volkman, Halle; Professor König, Göttingen; Professor Frendelenburg, Rostock; Professor Busch, Bonn; Professor Reyher, St. Petersburg; Professor Charcot, Paris; Baron Larrey, Paris; Professor Morache, Bordeaux; Dr. L. Labbé, Paris; Professor Theod. Schwann; Professor v. Recklinghausen, Strassburg; Professor Spiegelburg, Breslau; Dr. Benedikt, Wien; Professor Brandes, Aachen; Dr. Bäumler, Freiburg; Dr. Munnich, Berlin; Dr. Fokker, Gröningen; Dr. Bidder, Mannheim; Dr. Mikulicz, Wien; Dr. J. Pecsely, Buda-Pesth; Dr. Waldeyer, Strassburg; Dr. Königsfeld, Aachen; Dr. Görtz, Strassburg; Dr. Sandro, Oran; Dr. L. Martineau, Paris; Dr. A. Herbert, Paris; Dr. L. Jullien, Paris; Dr. Brachet, Aix-le-Bains; Dr. Lahuppe, Dr. Chervin, Dr. Demons, Bordeaux; Dr. Barr, Geneva; Dr. Joel, Lausanne; Dr. C. Romano, Naples; Dr. S. Giordano, Cannero; Professor Albanese, Palermo; Professor Argento, Palermo; Dr. Keyes, New York; Dr. W. Y. Vandell, Louisville, Kentucky; &c.

Meetings of the officers of the various sections have been held, and in several of them a provisional list of subjects for papers and discussion has been drawn up, printed in the three official languages, and widely distributed at home and abroad. The following are the provisional lists prepared in Sections of Surgery, Diseases of Children, Diseases of the Ear. We have already published the list of subjects in State Medicine (see p. 679):—

SECTION V.—SURGERY.

1. Recent Advances in Abdominal Surgery. 2. On the Surgical Treatment of certain Diseased Conditions of the Kidney. 3. On recent Advances in the Method of Extracting Stone from the Bladder. 4. On the Treatment of Operation Wounds. 5. On the Treatment of Aneurism by the Elastic Bandage. 6. On the Comparative Advantages of Early and Late Resection in Diseases of Joints.

JOHN ERIC ERICHSEN, Esq., P.R.C.S., F.R.S., President.
PROF. E. H. BENNETT, M.D., PROF. HUMPHRY, M.D., F.R.S., W. S. SAVORY, Esq., F.R.S., } Vice-Presidents.
H. G. HOWSE, Esq., M.S., THOMAS SMITH, Esq., } Secretaries.

All communications regarding Section V. should be addressed to H. G. Howse, Esq., M.S., 10, St. Thomas's-street, London, S.E.

SECTION VII.—DISEASES OF CHILDREN.

MEDICAL.—1. The real Position of the so-called Rubeola, Röthein or German Measles, and its relation to Scarlatina and Measles. 2. Syphilis as a Cause of Rickets. 3. On the different kinds of Spinal Paralysis and Myelitis in Children. 4. The Conditions governing the occurrence of Albuminuria and of Paralysis as attendant on Diphtheria, or as Sequelæ. 5. The relationship of Chorea to Rheumatism, with especial reference to the nature of the Heart Murmur which so frequently attends Chorea. 6. The forms of Acute Tuberculosis other than ordinary Tubercular Meningitis.

SURGICAL.—1. The Surgical Treatment of Croup and Diphtheria. 2. The Surgical Aspect of Tapping for Empyema. 3. The Pathology and Treatment of Genu Valgum. 4. The Treatment of Diseases of the Joints, especially with a view to the Prevention of Deformity. 5. Treatment of Spinal Curvature, with special reference to Sayre's method. 6. The Nature of the so-called Surgical Scarlet Fever.

CHARLES WEST, President.
SAMUEL GEE, TIMOTHY HOLMES, HORATIO DONKIN, } Vice-Presidents.
ROBERT W. PARKER, } Secretaries.

All communications regarding Section VII. should be addressed to Dr. H. Donkin, 60, Upper Berkeley-street, London, W.

SECTION X.—OTOLOGY.

1. On the Value of Operations in which the Tympanic Membrane is Incised. 2. On Morbid Growths within the Ear and their Treatment. 3. On Loss of Hearing where the External and Middle Ears are Healthy.

WILLIAM B. DALBY, Esq., President.
DR. CASSELLS, DR. FITZGERALD, } Vice-Presidents.

All communications regarding Section X. should be addressed to W. Laidlaw Purves, 9, Stratford-place, Oxford-street, London, W.; or Urban Pritchard, 5, George-street, Hanover-square, London, W., Secretaries.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, November 4th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 29	29·50	N.	39	37	..	46	35	0·23	Raining
,, 30	30·12	W.	35	33	66	47	30	..	Hazy
,, 31	30·19	N.W.	46	42	71	52	32	..	Bright
Nov. 1	30·20	N.W.	45	41	..	45	41	..	Foggy
,, 2	30·19	S.E.	34	33	57	45	29	..	Foggy
,, 3	30·17	E.N.E.	39	37	63	48	30	..	Hazy
,, 4	30·45	E.	37	35	61	41	32	..	Hazy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

A PARADISE OF RHUBARB.

M. PRJEVALSKY, the Russian explorer, in a recent letter giving an account of his movements on the Chinese frontier, in Eastern Turkestan, describes a veritable paradise of rhubarb. Here he chanced upon a locality where the plant was found in prodigious quantity, and in the older plants with roots of colossal proportions. Taking at hazard one of these roots, he found that it measured 16 inches in length, 12 inches in breadth, 7 inches in thickness, and weighed 26 pounds.

Mr. W. Roger Williams.—The paper is marked for insertion.

WATERING-PLACES AND THEIR SANITARY CONDITION.

To the Editor of THE LANCET.

SIR,—The public owe you many thanks for your article on the Sanitary State of Margate. My own experience of that town enables me to corroborate your statements. The condition, however, of other watering-places, where men do congregate in large numbers, is equally bad, and equally deserves the lash of your vigorous whip. I give you in a few words my experience of Great Yarmouth, where it is stated that more than 20,000 visitors were enjoying the breezes of the eastern coast during the month of August.

As at Margate, so at Yarmouth, there is no system of drainage. Cesspools exist throughout the town in the back yards of the dwelling-houses. I went to Yarmouth with a delicate and ailing wife and two children in the month of August, when the weather was at its hottest, being ordered thither by my doctor for my wife's restoration to health. A few nights after our arrival I woke suddenly, and found my bedroom filled with the most abominable stench with which my olfactory nerves were ever afflicted. To jump up, close the open window—through which the horrid stench was pouring,—and to burn some brown paper was the work of a minute. In answer to my inquiries the next morning, I found that a cesspool, immediately under my bedroom window, had been emptied during the night, and that the landlady had cautioned her servants to close their own windows, but, dreading the hasty exodus of her lodgers, had expressly ordered them not to communicate the impending night-work to us. One of my boys was seized in a few days with shivering fits and feverish symptoms, which only vigorous measures prevented, I believe, from taking the form of serious illness. The other lad had an abscess in the ear, and was otherwise unwell. I had sickness and all-overish feelings, which necessitated, as in the case of the others, application to a neighbouring medical man. This was going to the seaside for health! The glorious breezes of Great Yarmouth are undeniable, and thankfully do I acknowledge their potency; but it seems the height of infatuation for man to stop the flow of healing influence by an obstinate disregard of the decencies and purities of modern civilisation.

I am, Sir, yours obediently,

London, Oct. 20th, 1880. H. W. G.

TABES DORSALIS CURED BY NERVE-STRETCHING.

DR. LANGENBECK reports in the *Berlin. Wochenschrift* a case of tabes dorsalis, in which nerve-stretching, conducted under antiseptic precautions, resulted in a complete cure. The left sciatic was first operated upon; the motor and sensory paralysis following disappeared in a few days. Twelve days subsequently the right sciatic and both crural nerves were stretched, and with the same results. The feebleness which marked the first efforts at locomotion soon passed off, and the ataxic symptoms disappeared.

L.S.A.—It would scarcely be worth while to raise the point.

Dr. Mahomed.—Too late for this week.

PAYMENT OF MEDICAL OFFICERS OF HOSPITALS.

To the Editor of THE LANCET.

SIR,—So many of the letters and articles contained in your late numbers point in the same direction that it appears right to call attention to their common end. Some of your correspondents condemn, and others defend, cheap dispensaries; while Mr. Ayres, of Deptford, casually mentions that in his ordinary practice he charges poor people as low as 9*d.* and 1*s.* a bottle for medicine; and at Guy's Hospital the authorities are disputing the authority and position of doctors who give time and hard work to the public *free of all charge*.

Surely now is the time to consider and discuss how it is that medical men so seldom make a retiring competence for themselves and a provision for their families. How is it that they as a profession always occupy an ambiguous position in "good society," only patronised or sneeringly tolerated when other professional men take an undisputed position? "Fine words butter no parsnips," and yet we are content to accept a few words of compliment about the unselfishness of our noble profession (often spoken with a half-veiled contempt), in place of the practical and pecuniary results of work that should stand on its own merits. People are judged much by the value they put on themselves and on their work. The public will only give us even the honour of its esteem when it is sure that no practical benefit will follow to us. The best man among us has never yet been made a peer, while more than half the peerage is made up of descendants of lawyers, who knew better than to work half their time for nothing. It is high time to recognise this fact, that every man of eminence in the profession who systematically gives gratuitous service in hospital work lowers the status and diminishes the fees of his professional brethren all over the kingdom to the remotest village. No other man or class of men gives systematic labour in hospitals. Why should doctors? Now is the time to speak. Let the profession insist on all its members engaged in hospital work being salaried. The men will be ten times more respected and esteemed at the hospitals; they will raise the position of the whole profession in the public estimation, and the public will delightedly pay us a hundred thousand a year more for services they will value more highly.—Yours truly,

Oct. 22nd, 1880. MEDICO-ETHICAL.

Club Doctor.—In the absence of a written agreement, it is doubtful whether the claim could be enforced. The matter should be referred to a solicitor.

Dr. W. H. Taylor.—It would, under the circumstances, be contrary to our rule to publish the description.

F.R.C.S. (Calcutta) is thanked for his communication.

THE EAST WIND IN RESPECT TO HEALTH.

To the Editor of THE LANCET.

SIR,—While heat and cold and damp have been constantly referred to as causes of disease, I do not think the effects of a dry wind, such as that from the east in our own country, have been worked out in a precise—i.e., scientific manner. To me its effects are very similar to that of the air of a room heated by a stove, no water being used to moisten the air by evaporation. I have felt the same sensations in a hot climate when doing hard physical work in a hot sun and a hot place, which could be checked only by frequent, though small, drinks of water. At the time I was in excellent condition, and could do any hard work all the day long. After all, one can take such effects of the external air very much as a slow heat-stroke, merely causing irritation, or, carried still further, as in a burn, where still more shock is caused, and the danger consists in the extent of surface injury, not its mere depth. Here the vaso-motor nerves, of course, are the sufferers; then the unpleasant action of this wind, if not well admixed with a southerly one, is the same as that of a burn or heat-stroke, only milder in degree. To show how strong the effects of an east wind are, I may cite its action on that most delicate of scents—viz., that of the hare. On two occasions, when hunting with beagles, the scent was gone in the afternoon, after being good all the morning, we not noticing any change; but in the night, strong easterly winds with frost set in, and the scent felt the influence long before we did. Again, with a pack of the same hounds, an easterly wind blowing, no scent on grass or plough-land; but on a broad beach of shingle an excellent one, simply because the sea-salt kept moisture enough in it to hold the scent. I do not pretend to compare these as identical, but merely to show what effect a dry wind has on animals, and also on the subtle scent given off by some. For the same reasons I believe that erysipelas, incipient sunstroke, relapses of ague, and dysentery are due to the dryness of this wind.

Your obedient servant,

October, 1880. WILMOT H. T. POWER, M.R.C.S.

THE FORCING SYSTEM IN EDUCATION.

AT the thirteenth annual meeting of the Canada Medical Association, a committee was appointed to consider and report upon the subject of excessive brain-work and cramming in schools. This step on the part of the Association was induced by certain facts brought forward by Dr. Grant in a paper read by him "On Gymnastics of the Brain," in which he dealt with the evils resulting to young people of too early education in ill-ventilated and overcrowded school-rooms.

House-Surgeon.—1. No.—2. Yes.—3. For the evidence a fee may be demanded, but not for the post-mortem examination.

Mr. H. W. Hall's letter will appear next week.

DIFFUSION OF ANTISEPTICS AND OTHER REMEDIES IN THE ATMOSPHERE OF APARTMENTS.

To the Editor of THE LANCET.

SIR,—It happens frequently that it is desirable to diffuse antiseptics in sick chambers. Many forms of apparatus to effect this object that have been devised fail for various reasons.

During last spring I had several cases in the treatment of which it was most desirable to have an antiseptic as well as a moist atmosphere. I had in use one of Mr. Swan Nash's bronchitis kettles. This afforded as much steam as could be required; but the small triangular trough with which it is furnished was quite unsuitable for holding any antiseptic. I accordingly removed the first joint of the delivery tube, and fixed in its place a common tin funnel. This was loosely filled with tow; the steam was delivered in greatly increased volume by this alteration of the arrangement. Upon the tow a drachm of pure carbolic acid was sprinkled, and in a very few minutes the odour of the acid pervaded every corner of the apartment. The great advantage of this form of fumigation is—first, its great simplicity; and secondly, the ease with which a supply of antiseptic can be set up. At regular intervals a fresh supply of carbolic acid is sprinkled on the tow, without the smallest difficulty or disarrangement of the apparatus.

It is very remarkable to note how grateful the purification of the atmosphere of a sick room is both to patients and to attendants. Cases of severe pneumonia have been strikingly benefited by the use of carbolic-acid fumigation, and in cases of diphtheria some such arrangement should be continuously in use both for the benefit of the patients and also for the protection of attendants and fellow-occupants of the ward. In a case of great gravity I had an elastic tube fixed to the kettle, and the funnel with the carbolised steam flowing from it was brought close to the bed of the patient, giving wonderful relief to his sufferings. Every sick ward—that is, wards constantly used for sickness—ought to be furnished with the means of antiseptic fumigation, and there are few cases that would not bear the antiseptic steam diffused by this apparatus.

Yours faithfully,

Marlborough College, Oct. 23rd, 1880. WALTER FERGUS, M.D.

Mr. T. P. Stephenson.—The practitioner himself is the best judge. The case is a good one, and the medical attendant should be well paid. Ignoring medicines, 100 guineas, with special charges for London journeys and consultations, would not be too much.

M. M.—The question is a legal one.

INTENTION IN THE DETERMINATION OF SEX.

To the Editor of THE LANCET.

SIR,—With your permission, I should like to ask Dr. Granville how he accounts for difference of sex in the case of twins?—Yours &c.,

October, 1880. A. G. P.

A. M. is referred to an article on the subject in another part of our present impression.

Mr. A. B. Lownds does not explain the kind of machine for which his device is intended.

"HOMŒOPATHIC PRACTITIONERS."

To the Editor of THE LANCET.

SIR,—In your last issue you accuse the homœopaths of sailing under false colours, as there is no indication of their mode of practice in the Directory. In my own case, and in others that I know of, the fault of this omission is entirely due to the editors of the Directory, who utterly ignored and omitted to insert the announcement of my connexion with the British Homœopathic Society and appointment at the Birmingham Homœopathic Hospital, both of which I returned with their annual circular on two occasions.

I trust to your fairness to make this explanation as public as your accusation; and I must say that it is a little hard upon us that after for several years the head and front of our offending being made the fact of our assuming a distinctive name, we should now be condemned because the distinction is not made in the Directory.

I am, Sir, yours &c.,

ED. M. MADDEN, M.B.,

Surgeon to the Birmingham Homœopathic Hospital.

Birmingham, Nov. 3rd, 1880.

*** Mr. Madden, M.B., is seeking one object; we are striving for another. He would have the editors of the Medical Directory recognise homœopathic hospitals by inserting appointments to these institutions. This recognition we should deprecate. What we desire is that some distinguishing mark should be placed against the names of homœopaths to avoid mistake.—ED. L.

BRITISH MEDICAL TEMPERANCE ASSOCIATION AT BRISTOL.

UNDER this head *Temperance* writes:—

"I would, with your permission, point out a matter which I think is deserving the attention of teetotalers—that is, the utter untrustworthiness of the statistics set forth to show the advantages of total abstinence over even temperance. I took some rough notes of some of the figures read out by Dr. Ridge in his paper. These figures read thus: There is an Assurance Society which divides its members into non-abstainers and abstainers for comparison as to longevity, with the result that one non-abstainer dies in forty, and one total abstainer in one hundred and forty-one per annum. Again, a Total Abstinence Club, carried on at Colne, has a death-rate per annum of 9·9 per 1000! Well, this means, seeing that people do not often insure their lives until they are twenty years of age—that, in the first case, a person who enjoys some of the good things provided may live to the beggarly age of sixty years on the average; while if he will drink water only, he may live until he is a hundred and sixty years of age! Again, in the second instance, a man after insurance, who is a teetotaler, may live for another hundred years! Such statistics might be brought forward by the genuine teetotal stump orator, and might go down with the unthinking public. But, I would ask, are they worthy of a man having such an eminent position as Dr. Ridge, or a fit pabulum for perhaps his equals?"

Mr. Nourse.—The announcement in our number of October 9th will be found to be correct.

Dr. Jas. Johnstone.—We think it would not be advisable to publish the letter.

SEA-BATHING IN WINTER.

To the Editor of THE LANCET.

SIR,—Having occasionally read remarks in your journal upon cold bathing, I venture to send you some details of my own experience, having bathed in the open sea regularly all the year round for two years and a half, including two severe winters. I am in my forty-third year, of active and temperate habits, accustomed to much exercise in the open air, but not altogether strong, having indeed come to the seaside for rest and change after a partial breakdown of the nervous system, which necessitated an easy life for two or three years. I am careful (1) *to stay in the water a very short time:* ten seconds in winter and a minute or two in summer is enough for me. I think this is the *secret of useful bathing.* There is hardly time to lose much heat, and the reaction comes on directly after getting out. (2) Not to bathe if feeling unwell at the time, nor when tired, and *to keep the body warm by exercise* before and after the bath. I have often missed a single day, twice only three days together, because of a slight cold or biliousness.

As for the *benefits*, sea-water may be different from fresh; but I agree with your remark that they are questionable, and each must judge for himself. To me personally I think there are general, though perhaps indirect benefits—viz.: (1) *The moral resolution* which has enabled me to go and bathe almost before sunrise (if tide required), with ice and snow to the water's edge, helps one to keep up a good standard of health. (2) *The direct physiological effects* I cannot speak of scientifically; but the act of bathing and the warm and pleasant reaction seem to be almost like an athletic exercise, and certainly in mid-winter I have sometimes felt the exhilarating glow in the most decided manner.

In conclusion, it seems to me that cold bathing requires much care if it is to do good, and I cannot help thinking that many people who go to the seaside in summer and bathe lose most of the benefit by staying in the water much too long. I am, Sir, yours truly,

October, 1880. NEMO.

THE USE OF IMPURE MATERIALS IN ERECTING BUILDINGS.

To the Editor of THE LANCET.

SIR,—I have felt interested in the discussion going on in THE LANCET on the above subject, and have been astonished that none of your correspondents have taken notice of the extensive use of putrid matter that is mixed with the plaster in the shape of hair. My attention was drawn to this subject by an outbreak of typhoid fever which raged here some five years ago, and which was almost entirely confined to a district containing a number of newly-built houses—a district, it is true, that was badly supplied with water, but still not to such an extent as altogether to account for the scourge, seeing that the houses which had been inhabited for a length of time were not found to contain the disease to such an extent as those of recent formation. These houses, I may mention, had been occupied before the plaster was thoroughly dry, and it occurred to me that the poison might to a large extent be generated in their walls, and have as its origin the decomposing animal matter with which the lime was mixed. My observations have also led me to notice isolated cases of typhoid occurring in country places, where the houses were in a defective condition as regards their water-tightness, permitting of rain soaking the walls, and no doubt setting up some chemical action between the lime and hair. That the hair which our plasterers use is a source of danger to the occupants of newly-built houses, as also to those whose habitations are damp from defective roofing or drainage, is a fact of which I am thoroughly convinced, and so long as people will be stupid enough to occupy such houses, so long will the evil last; but that a substitute for this putrid animal matter should not have been invented is a disgrace to this enlightened age, and one that will have the serious consideration of our sanitary authorities, is the earnest wish of,

Yours faithfully,

Galashiels, Oct. 26th, 1880. W. H. MURRAY, M.D.

Mr. Thos. Browne and *Inquirer* will find on reference to the Directory that Mr. Wm. Arthur Stradling is surgeon in the West Indian Mail Service. H.M.S. was a misprint for R.M.S.

CERTIFICATION OF INSANE PAUPERS.

To the Editor of THE LANCET.

SIR,—Allow me to mention what occurred to me personally on this subject in support of the opinions of your correspondents. Some months ago I was appointed surgeon to a large union workhouse hospital at a fixed salary of £250; no extras. The Local Government Board refused to confirm such an appointment on the ground that lunacy fees cannot be legally contracted for. After a deal of correspondence I agreed to accept £220, with extras, this difference being an average of my predecessor's extras for three years. In a pecuniary point of view I am so far a good deal in pocket. Yours &c.,

Nov. 1st, 1880. J. P. C.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayrer; Mr. J. Hutchinson, London; Mr. MacCormac, London; Dr. Mahomed, London; Mr. R. C. Lucas, London; Dr. Sharkey, London; Dr. Hill, Birmingham; Dr. Reed; Mr. H. Laupp'sche, Tübingen; Dr. Hughes, Llanberis; Dr. A. M'L. Hamilton, Queenstown; Dr. Tayler, Anerley; Surgeon J. Ronayne, A.M.D.; Mr. Smeeton, Jamaica; Mr. Potter; Dr. Drysdale; Dr. Byrom Bramwell, Edinburgh; Mr. Dudgeon, London; Dr. Monckton, Rugeley; Mr. T. Browne; Dr. R. J. Morin; Mr. H. J. Lloyd, Barmouth; Dr. C. Taylor, Parramatta; Dr. Fowler, London; Mr. Paulson, Loughborough; Messrs. Agnew and Sons; Mr. H. Field; Dr. C. MacDowall; Dr. J. Gamgee, Washington; Mr. T. Woods, Gillingham; Mr. H. E. Armstrong; Dr. Johnstone, Edinburgh; Mr. Scudamore, London; Mr. Rendle; Mr. Wilson, London; Mr. Judge, London; Mr. Benham, London; Mr. Tallack; Dr. Jacob, Leeds; Dr. Drummond, Newcastle-on-Tyne; Mr. Palmer, London; Mr. Abbott, London; Mr. Jackson; Mr. Elliott; Mr. W. E. C. Nourse, Exeter; Mr. H. W. Hill, Manchester; Mr. Madden, Birmingham; Mr. J. H. Nicholson, Manchester; Mr. S. Boyd; Mr. Mercier; Messrs. Rushworth and Abbott, London; Messrs. Herbert, Miller, and Co., London; Mrs. Garner; Messrs. Stenth and Co., Guildford; Mrs. Coker, Horncastle; Mr. Warner; Dr. Edward Laurie, Lahore; Temperance; Club Doctor; A. M.; J. P. C.; A. G. P.; M. M.; General Practitioner; Medicus; R. W.; L.R.C.P.; C. M. C.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Hopson, Newcastle-on-Tyne; Mr. Weatherhead; Mr. Llanworne, Hereford; Mr. Casson, Ulverston; Messrs. Porteous and Co., Glasgow; Dr. Munro, Manchester; Miss Rosser, Southall; Mr. R. D. Ford, London; Mr. Totten, London; Mr. Scattergood, Leeds; Mr. Kempthorne, Callington; Messrs. Keith and Co., Edinburgh; Mr. Crabb, Holloway; Messrs. Shiers and Haddon; Dr. Lister, Newton-le-Willows; Messrs. Holbrook and Son, Portsmouth; Mr. Lees, Oldham; Dr. Weaver, Langton; Mr. Garrard, Derby; Mr. Sergeant, London; Mr. Jordan, Birmingham; Mr. Brainsby, Peterborough; Mr. Whiteley, Leeds; Mr. Cole, Holywell; Mr. Pratt, Cardiff; Mr. Lowe, London; Messrs. Lee and Nightingale, Liverpool; Mr. Walker, Wakefield; Mr. Williams, Pwlheli; M. De Casinette; Mr. Sanders, Manchester; Mr. Richardson, Leamington; Dr. Allbutt, Leeds; Messrs. Gurdon, Berdoe, and Co.; Mr. Cooper, Croydon; Miss Sullivan, Leicester; Veritas, Chesham; B. D. F.; Dispenser; H. O. S., Gomersall; A. Z., Patricroft; Medicus, Sheffield; M. N., Holloway; W. F.; W. H. M., London; Edinensis; Medicus, Preston; Fides, Balham; Alpha, Newcastle-on-Tyne; Veritas; Medicus, Rathmullen; Medicus, Wilton; H. M. P., Port Elizabeth; R. C. S., Birmingham; Beta; Statim, London; Medicus, Cardiff; Ch. M.; E. J.; J. B.; M.D., Leicester; Medicus, Leeds; M., London; Q., East Retford; M.D., Clapton; &c.

Journal de Médecine, Indian Daily News, La Escuela de Medicina, Englishman, Chemists' Journal, Irish Times, Anglo-American, Dumfriesshire Herald, Democrat, El Medico y Cirujano Centro-Americano, St. Louis Globe, Sciences, Halifax Times, Willesden Chronicle, Specialist, Education, Revue Mensuelle, Gaillard's Medical Journal, Scarborough Mercury, Medical Herald, La Sciences Libre, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Nov. 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Dowse will exhibit a Patient with Tumour of the Cerebellum."—Dr. Sansom: "A Case and Specimen illustrating the Causation of the Pre-systolic Murmur"; "The Cause and Significance of Reduplication of the Sounds of the Heart."

Tuesday, Nov. 9.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Cavafy, "On Amœboid Movements of the Colourless Blood-corpuscles in Leuckæmia."—Mr. Brodhurst, "On the Nature and Treatment of Genu Valgum."

Wednesday, Nov. 10.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
HUNTERIAN SOCIETY.—7½ P.M. Meeting of Council.—8 P.M. Mr. Couper, "On a Case of Nephrectomy."—Mr. Waren Tay: "Notes of a Case of Colotomy performed six years ago for (*l*) Annular Stricture, Patient still living."
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. Chas. Stewart: "Notes on some Acanthometridæ."—Dr. Carpenter: "New Working Microscopes."

Thursday, Nov. 11.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Nov. 12.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—7 P.M. Conversation and Exhibition of Objects.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. James Adams, "On a Case of Ligature of the Common Carotid and Subclavian Arteries for an Aneurism, supposed to be of the Innominate Artery."—Dr. Duckworth, "On two Cases of Myxœdema."—Dr. Sturge and Mr. Godlee, "On Stretching of the Facial Nerve for Relief of Spasm of the Facial Muscles."—Dr. T. Colcott Fox, "On a Case of Persisting Gyrate Erythema."

Saturday, Nov. 13.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year.....£1 12 6 | Six Months £0 16 3

TO CHINA AND INDIA ..... One Year, 1 16 10

TO THE COLONIES AND UNITED STATES .. Ditto, 1 14 8

Post Office Orders should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable at the Post Office, Charing-cross.

Notices of Births, Marriages, and Deaths are charged five shillings.

Cheques to be crossed "London and Westminster Bank."

ADVERTISING.

Books and Publications	£0	5	0
Official and General Announcements	0	5	0
Trade and Miscellaneous Advertisements	0	4	6
(Seven lines, each averaging ten words, or seventy words in all).			
Every additional Line	0	0	6
Front Page ... per Line	0	1	0
Quarter Page	1	10	0
Half a Page	2	15	0
An entire Page	5	5	0

The above Scale of Charges is arranged upon the basis of the classification adopted in the Index.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements (on page 2), which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom.

The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.